OUR SOLDIERS
AND
OUR [illegible]

[illegible]

PRESENTED BY
EDGAR M. CROOKSHANK, ESQ.
SENIOR VICE-PRESIDENT
OF THE COLLEGE.
1925

THIS BOOK
IS THE PROPERTY OF THE
ROYAL VETERINARY COLLEGE
CAMDEN TOWN

22101720759

Med
K26990

Ceylon.

itan.

OURSELVES, OUR FOOD,

AND

OUR PHYSIC.

BY

BENJAMIN RIDGE, M.D., F.R.C.S., ETC.

AUTHOR OF
"A SYSTEM OF GLOSSOLOGY; OR THE ADDITIONAL MEANS OF DIAGNOSIS OF
DISEASE TO BE DERIVED FROM INDICATIONS AND APPEARANCES
OF THE TONGUE;"
"HEALTH AND DISEASE, THEIR LAWS; WITH PLAIN PRACTICAL PRESCRIPTIONS
FOR THE PEOPLE," ETC., ETC.

> "Let not your ears despise my Tongue for ever,
> Which shall possess them with the heaviest sound,
> That ever yet they heard."—SHAKESPERE.

NULLA SINE CAUSA NOTA.

LONDON:
CHAPMAN AND HALL, 193 PICCADILLY.
MDCCCLXI.

[The right of Translation is reserved.]

WELLCOME INSTITUTE
LIBRARY
Coll. welMOmec
Call
No. WC

LONDON: PRINTED BY W. CLOWES AND SONS, STAMFORD STREET AND CHARING CROSS.

PREFACE.

"To know ourselves" is an expression that may be used in a twofold sense. The usual acceptation I forego, and take the more material one of "knowing ourselves" as respects our body, its construction, and the general uses of all its members and organs. Nor will I stop here; but include also its properties and chemical composition, and view it as the highest organism designed by the GREAT ARCHITECT.

The study of all these subjects necessarily exalts and ennobles the mind, which is the highest attribute given to organized beings. To know how the smallest seed germinates and grows—to discover the self-supporting powers and laws of organic creation, and to trace the many gradations of vital actions to the highest, namely—that of man, is a gift indeed of surpassing bounty. Wherever civilization has existed, in whatever country, the mind of man has there laboured in this field. Every nation has contributed its fair and due proportion to the discovery of all our structures and the uses to which they are applied, and it would be difficult to apportion the greatest merit, or offer to either the largest mead of praise for zeal, or diligence, or amount of its contribution.

As we receive from vegetable and animal life elements of nutrition similar to our own, it is evident that they have the same ultimate composition. Whatever substances vegetation requires in order to renew its material structure, are yielded by the alkaline humus of the earth. Vegetation supplies in its turn material elements to the animal organisms which feed thereon, and these again to the next class who feed on them; whilst man lives on all. Thus each rises in the scale of being, one above the other; but that which strikes the mind as the most wonderful process is, that those elements which all the higher part with as excess, or throw off as useless, supply again the lowest of the scale; so by a wondrous circle of organic law, the great living mass of all created things exists and moves and has its being. All the mighty changes, transformations, and metamorphoses of structure being carried on by vital and chemical laws—by similarity of action, which in their integrity is health; certain departures therefrom result in disease, decay, and death.

To illustrate health on a fixed and fundamental principle—to point out wherein consists the departure therefrom; to exemplify disease by a consecutive law of gradation—to show how the same steps are retraced to gain health when lost; to elucidate by a wise administration of remedial agents their antagonism to the elements which produce disease, in a direct as well as in an indirect manner, through the agencies of the laboratories of the body itself; to discriminate the actions of these which the genius of man has discovered, and to place them hand in hand with direct hygienic remedies and diet,—is the object of this book.

Those who read it with attention will see that it is but a brief sketch of a greater plan to be further elaborated. Whatever matters are here set forth are the result of close observation and practical application of many years' devotion at the bedside, and are offered in all sincerity to those who covet more certainty in the relief of human suffering,—an end desired by the mightiest and the meanest of mankind who look to medicine for aid, and to the highest and lowest of those whose vocation it is to study and administer it.

BENJAMIN RIDGE, M.D., F.R.C.S., &c.

21 Bruton Street, Bond Street, W.
May, 1861.

CONTENTS.

CHAPTER I.

PAGE
The Anatomy and General Structure of the Body . . 1

CHAPTER II.

Physiology; or the Uses of Organs 6

CHAPTER III.

The Chemical Constituents of the Body 25

CHAPTER IV.

Health and Disease 35

CHAPTER V.

Diagnosis; or the Art of Discovering Disease . . . 47

CHAPTER VI.

Food and Physic 57

CHAPTER VII.

Medical and Self Torture 66

CHAPTER VIII.

Arrangements of Diseases by their Remedies . . . 72

CHAPTER IX.

Acid or Congestive Diseases.—The same accompanied by Alkaline, or Inflammatory Actions.

The stomach.—Enlarged tonsils; sore throats; ulcerated throats; quinsy; diphtheria.—Bronchial congestion.—Whooping-cough and croup.—Tracheal, or throat-cough; stomach-cough; and clerical sore-throat.—

PAGE

Headaches; dizziness; vertigo; asthma; indigestion; heartburn; hiccough; flatulence; constipation; some heart complaints; palpitation.—Gravel and stone.—Colics, &c. 76

CHAPTER X.

Bronchial Inflammation, or Bronchitis.—Pleurisy.—Congestive and Inflammatory Consumption 88

CHAPTER XI.

Congestive and Inflammatory Rheumatism.—Gout and Rheumatic Gout.—Neuralgia and Tic-Doloureux.—Apoplexy.—Paralysis.—Congestive and Inflammatory Diarrhœa.—Cholera and Dysentery 98

CHAPTER XII.

Blood-fevers—Congestive and Inflammatory, according as the Poison is in the Veins or Arteries.

Measles.—Influenza.—Scarlet-fever.—Pneumonia.—Peritonitis.—Pleurisy.—Muco- and sero-membranous inflammations 118

CHAPTER XIII.

FEVERS.

Congestive; or Venous and Acid.—Inflammatory; or Arterial and Alkaline.

POISONS.

Generated within the Body, or taken into it substantially or otherwise 133

CHAPTER XIV.

The Science of prescribing Medicine 149

CHAPTER XV.

Conclusion 186

Index 193

OURSELVES, OUR FOOD, AND OUR PHYSIC.

CHAPTER I.

THE ANATOMY OR GENERAL STRUCTURE OF THE BODY.

The Bones — Joints — Cartilages — Ligaments — Muscles —Fat — Cellular Tissue—Skin—Hair—Heart — Lungs —Windpipe—Gullet — Stomach and Intestines — The Liver — Spleen — Pancreas, or Sweetbread — Kidneys — Bladder—Head—Brain—Nerves — Arteries —Veins — Capillaries — Lymphatics—Absorbents—Lacteals—Mucous and Serous Membranes—&c., &c.

Everything in Nature is acknowledged to be governed by Law. It is singular, however, that while science endeavours to reduce this to actual fact in all other studies, those of Health and Disease have not hitherto been arranged under any law whatever. In the investigation of these subjects it is absolutely necessary to be acquainted with the constituent parts of the body—to know their uses and chemical properties, and to take an enlarged and combined view of their whole inseparable phenomena. This I purpose doing in the briefest language.

Anatomy is the study of the general structure of all organized bodies, the human frame being composed of the following parts :—

The Bones.—Man in his exalted position in nature is erect, his body being supported by a framework of bones ; his feet, curiously and beautifully formed, act as pedestals, and support him in all the duties of locomotion. To facilitate this, the toes are composed of many bones ; the ankles being indebted to their flexibility from the same cause. Rising above these are his legs, each of which is composed of two bones from the ankle to the knee : the thighs consist each of a single bone, whilst a knee-cap protects the front of each joint. Each thigh bone is inserted into a composite bone, called the pelvis in front, the hips on either side, and sacrum or wedge-like bone at the back, which forms the base of the spinal column, and on which it rests.

The whole of the pelvis being circularly formed and well united, will be seen to be the centre of strength, on which all the upper members rest, and wherein the lower limbs move easily. The spinal column, or the backbone, consists of a series of bones called vertebræ: the lower, numbering five, are called the lumbar or loins; above these are twelve, called the dorsal or back, then seven above these, called the cervical or neck, on the topmost of which is the head. Between each vertebra are natural buffers called cartilages, all held together by strong ligaments, so that the whole column can bear the heaviest weights or pressure, concussion being thus prevented either from leaping or jumping. The head or skull, apparently but one bone, consists of several: that portion forming the face is also composed of a variety, forming the nose, sockets for the eyes, cheeks, &c.

The ear bones are thick and strong, and form the base on each side from which the arches of the skull arise; the various bones of which are called *frontal*, or forehead—*parietal*, or side-bones—*occipital*, or bone at the back of the head. The ribs are circular bones fixed at one end to the *dorsal* or back vertebræ, and coming round to the front, are inserted into the straight flat breastbone, by which arrangement the cavity of the chest is formed. At the top of the ribs there are the *collar* bones, and at the back two *blade* or shoulder bones, which meet in a most mechanical manner, and form the sockets for each arm. These have one bone from the shoulder to the elbow, and two from the elbow to the wrist, forming the fore-arm; whilst the wrists and hands are composed of many bones similar to the ankles and feet. The bones themselves are porous, the long shaft bones being hollowed, and having an internal pith or marrow. Externally they are covered with a thick, tough skin peculiar to them, which adds greatly to their strength. The number of bones of the body have been estimated by various anatomists at 260, 253, and 197; the difference being simply in their divisions, especially of those which are so combined as to form apparently only one, yet may be separated into more parts.

Joints, with their Cartilages and Ligaments.—Every joint is formed of two or more bones, having their ends protected by cartilage or gristle, and are held together by strong ligaments, thus forming a more or less hinge-like apparatus. Within them there is a fluid secreted called synovia, vulgarly joint-oil, for their proper lubrication.

THE MUSCLES.—The general configuration and symmetry of the body depends on its muscles or flesh. These arise from one part of a bone and are inserted into another part, or from one bone and become inserted into the next. They have direct as well as antagonistic actions; they extend or draw in the limbs under the direction of the will. The fleshy parts of these are the muscular structure, whilst their thinner terminations are called tendons. All muscles can be more or less distinctly traced by their skinny coverings or *fascia*, which give them an easy play over each other; hence anatomists have been able to separate, trace, and name them. Their number amounts to about 350.

FAT, CELLULAR TISSUE, SKIN, ETC.—Over the muscles Nature has provided certain fatty deposits; upon these a beautiful fabric, called the cellular tissue, forms a network of blood-vessels, which nourishes the parts beneath and the true skin immediately above it, whilst an upper skin covers this. A small watery space lies between these two skins, yet so closely connected are they, that until a gall or a blister separates them, they would be scarcely known to exist as two distinct organisms. This, then, is the general framework of the body as it appears externally; parts of it being protected with hair, and the termination of the toes and fingers with nails, the uses of which are patent to all. The facility of movement of the whole or parts of the body, and its powers, need no illustration. Dancers, acrobats, wrestlers, and those who indulge in gymnastics, and every one, in fact, who takes riding, walking, and other exercise, must appreciate its wonderful flexibility and endurance. We must next take a view of the inside of the body, and all its wondrous organs which sustain and regulate the whole fabric.

THE CAVITY OF THE CHEST.—This is formed by the ribs and the back and breast bones; the upper parts being protected by the collar bones, and the lower floor supported by a muscular partition called the diaphragm or midriff, which is attached to the breast bone, the lower ribs and vertebræ of the back, and separates this cavity from the abdomen. In the chest this midriff is arched, and in the abdomen it is dome-shaped: it moves upwards and downwards to assist the lungs in breathing. The cavity of the chest contains—

THE HEART, LUNGS, WINDPIPE, GULLET, ETC.—The heart is in the middle, contained in a muscular bag, and is the great centre of the circulation of the blood. The lungs are on each side. The windpipe comes down at tho back of the heart, and divides into two portions, one going into each lung. It is called the windpipe until it is thus divided, then each portion becomes the commencement of the bronchial tubes, which are numerous air-tubes penetrating every part of the lungs. At the back of the windpipe, and to which it is attached, is the gullet, on its way through the diaphragm to the stomach. The windpipe is composed of cartilaginous rings, in order to keep the tube open for the free ingress and egress of air, while the gullet is a muscular bag protected and held up by the windpipe. As it would be impossible to fill a sack without its being held open, so the windpipe holds the swallowing sack or gullet, which dilates with everything passing down it, and contracts above when food has passed. There are other anatomical contents of this cavity, but not necessary to be named here.

THE CAVITY OF THE ABDOMEN contains the *stomach*, inclining from left to right; below which is the residuary stomach or *duodenum;* then follows a very extensive gut, called the small *intestines*, which terminates in a cavity within the right hip, called the *cœcum*, or head of the LARGE INTESTINES, to which I must draw especial attention, as it has four great divisions. The first or ascending portion passes up the right side as far as the ribs and liver; the second or transverse passes beneath the liver and stomach; the third or descending portion extends from the spleen downwards to the cavity of the left hip, and makes a double curve like the letter S over the pelvis; and the fourth is a straight intestine, called the RECTUM.

THE LIVER is on the right side, under the dome of the diaphragm, partly protected by the ribs, and touching the stomach.

THE SPLEEN occupies a similar position on the opposite side.

THE PANCREAS, OR SWEETBREAD, is a large salivary gland lying at the back of the stomach.

THE KIDNEYS, one at each side of the two last back and two first loin vertebræ; long ducts from which, called ureters, descend into the BLADDER, which is situated in front of the pelvis before the rectum. In front of the back bone are the great blood-vessels of the heart, which convey the blood from and carry it back to that organ, which will be hereafter explained. All the organs of the abdomen are in apposition, so that there is no space between them, and all are kept so by the pressure of its walls, so that however fat or however thin a person may be, Nature provides for this compactness.

THE HEAD.—THE CAVITY OF THE HEAD, OR SKULL, contains the BRAIN, which consists of two distinct parts:—the large or reflecting portion is situated in the front, sides, and top, and is divided into two hemispheres; the smaller, or instinctive, brain is situated at the back part of the skull. A continuation of brain matter, called spinal marrow, passes down the whole of the spinal column, each vertebra having a proper aperture to receive it, so that it has a continuous length. The brain has no blood-vessels of any size passing through it, but is covered with a network of them, the whole being protected by a very tough membranous covering. The volume of blood contained in this network is considerable.

THE NERVES are given off from the lower part of the brain, and supply all the senses, hence they are called the sentient or feeling nerves. There are others also of a distinctive character, called motor, or nerves which regulate motion. The spinal marrow also gives off its two classes of nerves, one of motion and one of sensation.

THE ARTERIES, VEINS, AND CAPILLARIES.—The blood vessels are named arteries and veins: the termination of one and the beginning of the other is called a capillary; these traverse the whole of the body and every organ, and have their accompanying nerves: there are also other vessels, called the *lymphatics*, *absorbents*, and *lacteals*.

THE MEMBRANES.—These are of two distinct kinds, and to which I would draw especial attention.

First. THE MUCOUS MEMBRANE.—This lines the eyes, eyelids, the nose, the mouth, the throat, and windpipe, and traverses all the air-tubes of the lungs, also the gullet and all the intestines from the mouth to the rectum. It lines the kidneys and bladder, as well as all passages, traverses the tubes, glands, the blood-vessels, and every vessel circulating or carrying any fluid.

Secondly. THE SEROUS MEMBRANE.—This membrane covers the outsides of organs, such as the lungs, the heart, the bag of the heart, the gullet, and windpipe; the parts above and below the diaphragm or midriff, the outside of the liver, spleen, and stomach, and all the intestines and the inner walls of the abdominal cavity, the outer parts of kidneys, bladder, &c. Not only does it exist here, but the covering of every muscle and bone has the character of this membrane, as well as the external coverings of all nerves and blood-vessels.

The sexual organs of the male and female, and every part that enters into the general structure of the body, comes under the head of its general anatomy, whilst the uses of all these are termed its PHYSIOLOGY.

CHAPTER II.

PHYSIOLOGY; OR THE USES OF ORGANS.

Digestion; the first acid and alkaline process: the stomach—is an acid department; should always have solids to act on; chyme the first homogeneous mass formed therein.—The secondary stomach is the chemical or alkaline department; chyle the result of this action.—The small intestines; their absorbents take up the new food.—The cæcum or head of large intestines; great importance of these; the humouralists, solidists, and gaseists; over-purging to be avoided.—The kidneys.—The bladder.—The pancreas, or sweetbread.—The liver, a most ill-used organ.—The spleen, or milt, a great reservoir of blood, and purveyor of the bitter element in the system, which prevents thirst and fevers.—The heart and circulation of the blood.—All new discoveries are insults to the age in which they are made.—The arteries, capillaries, and veins.—The thoracic duct, the great receiver of the new fluid from fresh food.—The lymphatic system.—The union of the new with the old blood which dilutes it; its purification through the lungs.—The lungs.—The head.—The divisions of the brain; the senses.—The eyes.—The nose.—The ears.—The tongue.—The mucous and serous membranes.—The nerves.—The electric telegraph compared to them.—The ganglionic system, &c., &c.

THE first process to be spoken of in the uses of organs is DIGESTION. This will include the use of the mouth, the teeth, the tongue, the salivary glands, the stomach, and the whole alimentary canal. The mouth first receives all the food, the teeth masticate it, and the tongue assists in moving the mass. All the glands and mucous cavities, wherever situate, secrete fluid for the purpose of moisture, and make it fit to be swallowed. At the time of taking food, the saliva, which is a salt composed of an acid and an alkali, has a predominance of acid, whilst the alkali is in excess when the glands are not in such active action. The stomach also at the time of taking food secretes at its lower portion a juice called gastric, or stomach acid, in very large quantities, nearly resembling muriatic acid, whilst at other times when food is not being taken the active secretion of gastric acid ceases. The free alkali of the saliva mixing with the food, which must always be considered of an alkaline character, renders it more fit to be acted upon by the union of the gastric with the salivary acids; by this simple arrangement more power is exerted over it. We shall have occasion to notice these *diluting* phenomena, both of fluid and gaseous elements within us, as we proceed. The result is, that a fluid mass is formed, notwithstanding much unmasticated matter is swallowed. Anything going into the stomach excites its secretory actions, whether a marble, a flint stone, or a coin, as well as all food or drink; all which it will endeavour to reduce to a pulpy state, even if it does not succeed. The solvent and other properties of its secretion are very remarkable; that for instance of being of an antiseptic character, or having the power of not only preventing putrefaction, but annulling it. Carnivorous birds and animals, who swallow putrid meat or carrion, if killed soon after a meal, the mass will be found sweet. The digestive powers and stomach apparatus of all animals depend on their food. Those which eat flesh are more simple than those which consume only vegetable substances, and thus as man partakes of both characters of animals, his stomach and its powers are formed accordingly. The stomach, if it be possible, will let nothing pass out of it without having first destroyed it completely; and here let me say that one of the great duties of the stomach is to have something solid to act upon. There is no greater mistake than to imagine that this organ is either to be humoured with only soft, well-masticated, or triturated diet, or to have heavy lumps and masses always thrown into it: the happy medium is the best. The fibre of meat and soft solids gives it some work to do, and we know from the fact of cases from injuries or wounds, external openings have been formed, and pieces of meat being put directly into it, digestion takes place of such matters within a given time, but not so perfectly as when it has had the benefit of the salivary process. The mass of food when digested is called CHYME, which is a thick creamy substance having more an acid than an alkaline quality. In this mass there are many oily and fatty substances which the stomach acids cannot convert, but which are more or less changed by the alkali of the saliva. As fast as the chyme is formed the stomach allows it to escape into the secondary receiver, which is as much an alkaline, as the stomach is an acid, department. Now see the wisdom of this. All the heavy work being done in the digestive stomach by acid agents, the secondary or chemical stomach simply receives and retains the mass for certain alkaline substances to act thereon. First a large amount of saliva comes from the sweetbread, and bile in larger quantity from the liver; these unite their alkaline masses in one tube before entering the department, and, thus diluted, mix with the chyme or stomach mass. Whatever surplus or stomach acid, therefore, may be therein contained, is quickly neutralized, whilst all fatty and oily matters are converted into a soapy consistence. All this, however, is so lightly amalgamated, that if it was removed from the system in this state, and acid added to it, it would resolve itself into the same condition in which it came down from the first stomach, and if treated again with an alkali, it would return to that state in which the bile and saliva had reduced it.

This mass, then, no longer retains its first stomach character, but takes the new name of CHYLE, which may be justly called a vital compound, to furnish the blood with new chemical elements. The chyle now escapes into the small intestines or the appropriating organs, where it is again mixed with the exhalations and secretions of the mucous membranes of this long passage; many pounds of this fluid being calculated to be secreted therein in every twenty-four hours. The nourishing particles are carried by the absorbent vessels into a proper duct, undergoing certain elaborating processes on their way; but where we must leave them for the present. The more solid constituents pass onwards, becoming more and more consistent until, as an effete mass with all its fluid nourishment extracted, it finds its way into the *cæcum*, or head of the large intestines, which receives and immediately shuts it off by a valve from this part of the digestive and appropriating canal. Thus, stomach digestion having first done its work, and chemical transformation completed it, the system appropriates the result. The fluids that are taken into the stomach at meals assist to dilute the mass and suspend the animal properties; wine and spirit if taken albumenize the mucus so largely secreted; the watery portions of which pass off, while the stomach digests the more solid coagulated masses. Milk, for example, is curdled by the stomach acids, the whey passes off, and the curd is digested. The same with broths, soups, &c.

We now take our leave of these great natural actions and come to the fourth and last, which is as great and as important as all these three together. The large intestines have already been described as going all round the abdomen from the right to the left side: they receive that portion of the digested food which comes under the denomination of non-nutritious. Their very size, length, and extent show their importance; indeed, their duties are of a far higher character than are popularly assigned to them. To say they are only recipients of fæcal matter, awaiting the natural desire to be evacuated, is too absurdly simple. If that had been all that was required of them, they need not have been a quarter the length, but they appear to be formed to receive and retain a very large mass before it is allowed to escape. From whence does Nature get her large amount of vital gases? We find a solution to our question. Why! from this very source; and if I may use the term in an agricultural sense, it is her forty-acre field on which she spreads her manure, and without which she can get no crops. It is absolutely necessary to health that this great alembic or field should be always two-thirds full or covered:—one-third being disposed of at certain intervals, as having yielded its due share of gaseous elements, and to make way for the new deposit. It is here then, that the nitrogen, ammonia, phosphorus, hydrogen, and other vitalizing gases are formed in all their varied combinations, and which permeate the whole living body. It will now be clearly seen how injurious must be the constant use of aperient medicines, or when they are given at improper times or in excess, carrying away the vital agents from the system which are the very germ of life. Can we wonder at the prostration caused by a brisk diarrhœa or by cholera? The ancients and moderns have fought many a battle, with more or less acrimony, over this poor body of ours. One of their greatest contentions being over the solids and fluids. One sect declaring that life, health, disease, and treatment depended on the fluids or humours; hence they were called 'HUMOURALISTS;' the other declared for the solids; hence they were called 'SOLIDISTS;' and even now the dispute is not settled. But they have either forgotten or not taken into account the laws of the gases; we may expect, therefore, some day to have a new sect called the 'GASEISTS.' However, it is to be hoped we shall get wiser, and see that a perfect equilateral triangle can be made out of these theories, and by reasoning on the laws of vital chemistry. find that one is so dependent on the other, that neither can be called the least nor the greatest. Solids, fluids, and gases are all so necessary, coexistent, and useful, and so merge into and actually form one another, that each is of equal importance in life and health, and in the cure and treatment of disease; instanced daily in a thousand ways. Man, however, will make arbitrary rules for health, which, coming as they do with some stamp of authority, are more or less obeyed. Thus the edict has gone forth that the bowels should act every day; and when anything untoward happens to the system, the first duty is to empty the large intestines, and that no treatment can be correct unless these parts are effectually kept open. Now let us read dame Nature's book, and throwing all these cherished scholastic rules aside, judge for ourselves. She requires manures to get her vital gases; we have seen the size and form of her field, and how careful she is that it should not be robbed. A vast number of persons have a regular daily action, and thus part with *one-third* of the contents of the large gut, reserving the other *two-thirds* for the supply of vital gases. Another class, unable to eliminate these vital gases so readily, require a longer time to do so. Well! Nature says, 'take more time,' and it is found they are just as healthy by the delay in such an act, as the others are by a daily regularity. In another class, even a longer period is necessary. 'Take your time,' says the good dame; whilst in others, especially among females, several or even many days are needed to get the due supply from this field. It must follow then, that if it be attempted to reduce these latter to the state and condition of the former, the greatest evils arise. As well may it be sought to bring the daily regular evacuants to the condition of the latter, and keep their bowels confined; but these persons become feverish, suffer headaches, and a host of ailments, whilst the others would, by being constantly purged, be reduced to a wasted, emaciated, and nervous condition. Little as people suppose it, there is no greater wisdom in the whole practice of medicine, than to know when, and when not, to act upon the bowels. Diseases continually present themselves to me from the pernicious use alone of taking aperient medicines: many diseases are aggravated by the false principle in medicine that the bowels must be kept open. Great ignorance prevails in the treatment of certain fevers, where Nature always will lock up the bowels and man always will open them; that is, he tries to do so, but cannot always succeed, for Nature will not let him have his own way at all times: when he does succeed, he kills. The only satisfaction being, that the patient died by the rules of art. A sudden fall that will shake a man to the very centre has often ended fatally from these false rules of schools, insisting on the obstinate bowels being opened. Middle-aged people who have, up to a certain time, been of regular habits, will become somewhat constipated. I have seen this amongst all classes, and in medical men themselves who have led studious lives; but whether it is themselves or others, these obstinate bowels give them more trouble than enough. They work away at them at a time, when Nature is clearly pointing out, that she retains her fæcal elements to get a greater amount of vitalizing gases; to restore on the one hand either injuries received or the powers that are otherwise declining with age. Purging of the bowels after severe surgical operations or serious injuries, in order to prevent what is called inflammatory actions or fevers, often produces them; for Nature always endeavours to restore lost power, which the surgeon, from a mistaken notion, will take away. The practical experience of many years has long convinced me of these facts. I do therefore warn the public, who fly to aperient medicines for every ailment, to desist. I have no hesitation in saying that aperient medicines are used at least seventy-five per cent. more than they ought to be. When this subject is better understood, I shall be found correct.

These, then, are the great duties of the large intestines: on the one hand to contain and retain a large amount of animal matter, in order that the vital gases of the body may be duly eliminated therefrom, for without these, the system would soon perish. The large intestines are so constructed, as to leave much to the will of the individual, to retain both the gaseous and solid contents to suit his own convenience.

THE KIDNEYS.—The object of these valuable organs is to remove so much excess of the uric acid constituents of the blood not required by the system generally, or the organs below them; consequently, Nature has given off the arteries to these organs below all the larger ones of the great trunk. It is said that the kidneys purify all the blood of the body; but this can only be in a degree, as urea and uric acid are essential elements of the blood; but as the same quantity is not wanted at the lower extremities as above, the kidneys act as regulators. They never cease their secreting action; but as the receiving parts in them are so small in comparison to the quantity of urine made, a duct runs down from each into a receptacle called the bladder. These ducts are always full; the pressure of fresh urine from the kidneys above forces the whole contents of these tubes, and so the bladder is filled drop by drop.

THE BLADDER.—The use of this is to receive the urine as above described, to retain it according to the will and convenience of every individual. As it is a purely excrementitious fluid, the quantity varies according to many circumstances.

THE PANCREAS, OR SWEETBREAD, is a large salivary gland; its secretion is in proportion to its magnitude, being one of the great chemical agents in the second act of digestion, viz.—to supply a salivary alkaline fluid to *dilute* the more caustic alkali of the bile.

THE LIVER is an organ of considerable size, as well it may be for the duty it has to perform. There is this one great peculiarity in it, that as all other organs of the body which make a secretion to be used again, form theirs from the arterial blood; the liver makes its secretion from that portion of the residuary or venous blood in its way back from all the abdominal organs. Therefore it is necessarily large in the first place to receive such a quantity of blood and to form bile in proportion. It is hard-working, useful, ever acting, and kind; but at the same time the most vilified of any organ in the body, without a friend and with ten thousand enemies. It is kicked and spurred, and has every conceivable and inconceivable disease laid to its door, and when all the work can be got out of it that is possible, and is as tired as any poor hack after a long and heavy day's work, it is then spurred and kicked again and again, and called *sluggish*. The poor beast has every opprobrium heaped upon it. Has any one a headache—it is the liver! a pain between the shoulders—it is the liver! a stitch in the side—it is the liver! a nausea of the stomach—it is the liver! a shooting of the corns—it is the liver! a depression of spirits—it is the liver! a costiveness of the bowels—it is the liver! a relaxed condition—it is the liver! a want of appetite—it is the liver! a ravenous or constant craving for food—it is the liver! Everybody, in fact, is BILIOUS, consequently has something the matter with the liver; no matter what the ailment, from the simplest to the greatest, the liver! liver! liver! and nothing but the liver! is all the fault, and no doubt thousands wish they never had a liver. The great host of patients come, and the first thing they say is:—'I must tell you, sir, I'm very bilious; all the doctors say my liver is out of order.' Tell them a thousand things, anything, in fact, but about the liver, and you may as well talk Sanscrit; but just tell them their livers are out of order, and their satisfaction is immense. In a thirty years' practice of every description of case, and above two thousand cases of parturition, and the entire management of all these women, their infants, and their children; added to this, a large experience in post-mortem examinations, and I can truly affirm that the liver is a most ill-used organ, and never half or a quarter so diseased as imagined. I have seen many people with livers enlarged by mercurials, but which have gone down to their natural size by their use being discontinued—cases in which the liver was pronounced the largest ever felt; whilst the post-mortem examination revealed the smallest ever seen. Not once in a hundred times, that the liver is deemed the cause of the patient's malady, is it a fact that it is so. There are so many reasons against this, that it is surprising how long this delusion has been tolerated.

As this organ is considered so much more frequently out of order than any other, it is as well to speak more of it in this place. If it is to make bile, observe how many organs it depends upon. A man may eat an aldermanic dinner to-day, and be upon short commons to-morrow, so that he calls upon it to do the duty of a giant one day and that of a dwarf the next. Sometimes he takes a long fast, at others he is eating and drinking by instalments all day. At one time he eats more than the liver can supply bile for; at another, when it is active and makes bile in quantity, he does not give his system enough for that bile to act upon. Yet he is always expecting it to do its duty; and so it does when he lets it alone, and allows Nature to right herself. A sympathetic action in the system always regulates this. To be perpetually taking medicines, especially the mercurials, to act upon the liver is most pernicious, for when this has been done, and the liver exhausted of its bile, there is none left when a meal is taken; so that it is made to yield a quantity at a time that it has nothing to act upon, and crude bile therefore flows through the small intestines to be taken up by the absorbents and carried into the blood, and at another to pass rapidly through them, causing bilious diarrhœa. Then, again, for want of bile, crude masses pass without being acted on at all by it, and then the cry is for more mercurials, more and more spurring, for the liver is sluggish. All this is a prolific cause of its enlargement, as well of frequent debility and wasting of the body. Follies like these amount to an universal monomania, and are the fruitful causes of disease, of suffering, and of death. Again, all stimulating medicines given for the liver act as aperients, and these carry out of the system the vitalizing gases, and lessen the powers of life. Independently of the emaciation of the body, the foundation of organic disease is laid, or increased if present. It begets glandular enlargement, shatters the nervous system, debilitates the mind, filling it with hallucinations, thus opening the door to lunacy and a thousand evils. The liver is a most useful organ if let alone, but it has hitherto not only been made too prominent in all medical treatment, but the scapegoat of the ignorance of the general laws of disease.

The Spleen, or Milt, is the next organ to be noticed. This has no secreting powers; an immense amount of blood flows in and out of it, simply changed from arterial to venous. It is evidently a great reservoir to supply the stomach and other organs. In some fevers it is much congested, and in others much engorged; in either state, or even when it does not act properly, inconvenience arises in the system, of which THIRST is the prevailing symptom. Those who seldom or never suffer from thirst, are not subjects of fever or inflammatory actions, and seldom have anything the matter with the spleen. On the other hand, those who do suffer from continued thirst, are in consequence more liable to fever and inflammatory actions, and have splenetic disorders. I have therefore associated this organ with the phenomenon of THIRST. When it acts perfectly, I believe it supplies the bitter element of the bile; and as long as this is in due quantity in the system, thirst does not ensue; but where it is deficient, then thirst is present. Hence bitters will allay thirst in the absence of the natural element.

These, then, are the uses of the abdominal organs or *viscera*, though we have not quite done with them. However, we must proceed upon a broad principle and take the next cavity, the CHEST, with its contents.

THE HEART AND LUNGS, TOGETHER WITH THE CIRCULATION OF THE BLOOD.—These organs are so mixed up in their functions, that I cannot speak of their uses without including also the circulation of the blood. The heart is divided into four cavities, the right auricle and ventricle, and the left auricle and ventricle; the auricles being at the upper and the ventricles at the lower part.

We will first take the blood as it enters the right auricle of the heart. From thence it goes into the right ventricle, which propels it into the lungs. It then comes from the lungs into the left auricle, descends from this to the left ventricle, which propels it all over the body. Simple as these facts appear, it took many hundreds of years to complete this knowledge satisfactorily, and this was only done step by step at long intervals, the final discovery and completion of the circuit being made by our own Harvey, in the reign of Charles II. This ultimately threw an electric light on the path of physiology, and led to the discovery of the absorbent vessels, known as lacteals, lymphatics, &c., all which are engaged in the circulation and conveyance of certain fluids of the body, transmitting them to their proper departments. No sooner, however, did Harvey make his discovery known, than he was assailed by his professional brethren with all the malice of fiends; mobbed by their societies—abused with the utmost virulence—so that he lost much of his practice, and all this because he discovered and promulgated a great truth which ultimately triumphed. This is always the case with new and important discoveries. Jenner's discovery of vaccination was treated in the same way; even the stethoscope, with the sounding of the chest, which came just in time to save the profession from an intolerable standstill,—was repudiated; and so will everything else that is new, however valuable, because all discoveries are insults to the age in which they are made, on account of their convicting it of ignorance, which it never forgives.

Considering, then, the blood a perfect fluid, fitted to regenerate every part of the body, whether it is to keep it in health or to restore it when diseased in whole or part—to cure injuries of the smallest or most aggravated kind—to renew every structure—to pass into a given number of organs, in order that other secretions may be made from it, to be used again in the animal organism,—it must be considered a very wonderful life-restoring, life-keeping fluid, and such it is. In its division into three kinds, duties are assigned to it of great importance.

Thus, as arterial blood, it is sent from the left ventricle of the heart by means of uninterrupted vessels, called Arteries, to the remotest parts of the body. This portion has its peculiar laws of disease, and what may be called its inflammatory and watery conditions. The arteries convey the vital fluid to a certain point, then terminate in what are called Capillaries. These again have specific duties; the blood becomes much altered in them, and they exude or eliminate a fluid peculiar to them.

All fatty deposits seem to be made from the capillary exudation, as well as mucus on the lining membranes of all internal organs, and the perspiration of the upper and outer skin. The capillary circulation also has its laws of disease, and we can trace its excess of action in the gross and plethoric, and its diminished functions in the thin and emaciated. After the blood has parted with what the capillaries have to yield, it discharges itself into another and totally different set of vessels, called the VEINS. These are valvular structures, because they have their stream uphill, each valve forming a lock. They are, as may be inferred, different to the arteries, which begin large and end small, whilst veins begin small and end large, because they have to take back all the residuary blood of the arteries and capillaries from all parts of the body.

It will be seen how beautifully this venous or residuary blood is used again as a *diluent* to other animalized fluids. It is returned from all parts of the upper and lower extremities, meeting at last at one given point. That portion only from the abdominal organs going to the liver to make bile. The new material made from the fresh food is taken up by certain vessels called the LACTEALS. These empty themselves into a reservoir, called the THORACIC DUCT, which discharges its contents at the same terminal point as the veins, and thus the new becomes *diluted* with the old blood. There is also another astounding process, which is the LYMPHATIC SYSTEM. Vessels bearing this name traverse the whole body, and absorb all surplus or unappropriated fluid of every description. This quantity is enormous, even in the natural states; but through the effect of blows, bruises, swellings, hardness from cuts and wounds, and during the repairs of great injuries, their activity is increased. They thus convey an immense mass of animalized fluids of a vital and most useful character, the fabrication of the body itself, into the same duct as the new food-fluid is conveyed into, and which, thus united, is the new vital element. Thus, again, we see the economy of Nature and the self-dependence of animal life, for how little new material for the fresh blood is required in comparison to the quantity already present in the body! It may be reasonably inferred that one-fifth is only required of new elementary matter, four-fifths being supplied by the animal structure itself. The venous blood, as a separate element, is also subject to its specific diseases, and from this I have reason to think we have most of the congestive actions. A discrimination of disease, as influenced by the condition of the blood, whether arterial, capillary, or venous, is a point of the greatest importance.

Considering the many sources, as well as the condition of the new blood, which is a dark, homogeneous mass, a certain purification of it appears necessary. This is accomplished in the following beautiful and useful way. It is first sent into the right auricle of the heart, then into the right ventricle, whence it is propelled into the lungs. There it comes in contact with the action of the air through its porous tubes, and receives oxygen, whilst in return it yields carbon: thus a species of combustion ensues which causes a large amount of heat in the body. Wherever there is union of elements, heat is evolved by combustion. Even the very friction of the blood through its vessels causes heat: there is not a part of the body that does not in the metamorphoses of its structure emit heat, and therefore the caloric is well kept up. Here, then, we have seen the circle of the blood, which begins at our birth, and goes on without intermission as an involuntary act till our death, be that time long or short. Such are, then, the uses and duties of the heart, the great forcing-pump and centre of the circulation of the blood.

THE LUNGS.—Independently of the uses of these organs to purify the blood, they are designed also to breathe the air, and are beautifully fitted for that purpose. They are capable of resisting the cold air from two causes: first, by having new warm blood constantly sent into them, and thus generating heat by combustion; and secondly, from the peculiar construction of the very deepest bronchial tubes they always retain a large portion of warm air within them, which acts as a *diluent* to that which is newly taken. Nature has, however, other wise provisions, for the air passing through the nose or into the mouth, and down the windpipe, gets warmed over these surfaces on its way into the lungs. A healthy condition of the lungs is most important, as they regulate the supply of wind to aid us in using our voices in talking or singing, from the lowest whisper to the loudest sounds, the fine apparatus for this purpose being situated in the throat. Nor can we wonder at their diseases from the extent of the air-tubes, which are all lined by mucous membranes, and seem immeasurable. These are ever inhaling oxygen from the air externally, and constantly expiring carbonic acid gas, and subject to atmospheric and aërial impurities, both in substance as well as gaseous. The external parts of all the vessels and tubes that traverse the lungs seem to form their real substance, and these are all serous membranes to which the air is most obnoxious.

This completes the cavities and contents of what are called the trunk; the next part to be explained is—

THE SKULL, OR HEAD, which contains THE BRAIN.—This is divided into two parts,—the *instinctive brain*, situate at the back of the head, and the *reasoning brain* in the front, the top, and centre parts. From these arise the nerves of sensation and motion, generally in pairs, and giving us all our senses of taste, smell, hearing, feeling, &c. A continuation of this brain matter passes through all the spinal vertebræ, thus communicating with, and connecting every part of the body by a direct as well as by a recurrent action. The reasoning, or large brain, is divided into two hemispheres, and the whole is nourished by a network of blood-vessels, arteries, capillaries, and veins, which are again protected by a thick membrane, so that when the bone of the skull is removed this latter keeps the whole brain in its position. No large vessels traverse through the brain; the small ones that do may be considered more as capillary vessels. The face, which forms the front part of the head, is the seat of the most important of our senses and their distinctive organs; first, *the eyes*, beautifully situated, and protected in their bony sockets with sufficient fatty and soft matter round their external globes to enable them to move more freely at their bases, while the fore part of the ball of each is covered with a mucous membrane, beautifully reflected under the lid, so that they can traverse over each other, without the least sensation in the healthy state. The lid being furnished with lashes at its margins, which, when brought together, act as a veil to prevent foreign substances entering, and if they do, then the beautiful action of the eyeball itself, having a tendency to cause everything to gravitate towards the inner corners, thus keeping the eyes always cleansed from foreign substances. The inner globe, containing the sense of sight, is divided into chambers, having fluid humours as well as soft-solid, and highly refracting portions: the coloured circle is cálled the iris, which differs in all individuals; whilst that part on which objects impinge, and are discerned by the sense of sight, is called the *retina*. The iris contracts and expands according to the amount of light thrown upon it, so that it is in fact a natural and involuntary protector of the nerve. It also contracts or dilates according to the passions or excitement of the individual. The sense of sight forms a beautiful optical study. The nerves of the eyes are the largest of all the senses. The diseases of the eye are both simple and complex; simple when only functionally disturbed, but complex when constitutionally affected: they have led to the distinctive practice of oculists, who in all that concerns many delicate operations thereon are an eminently useful class, but in their medical treatment, they labour under the same errors from which the present state of medical practice generally suffers.

THE NOSE is the distinguishing feature of the face. It has double nostrils, and a very extensive mucous membrane which traverses upwards, and then goes backwards in a direct line to the top of the windpipe, so that it performs the double duty of the external inhaler and exhaler of air from the lungs, as well as for the sense of smelling.

THE EARS have given to them the sense of hearing: the ear bones are the first formed in the embryo, from which the arches of the skull rise: they have few diseases except deafness. There is a great difference in individuals in this respect: age may commonly be said to put on this first decay of the sense, but not always. Many families suffer deafness from a very early age. Great care should always be exhibited in the treatment of recent deafness; while, on the other hand, permanent deafness often arises from the excess of zeal and the over use of remedies in endeavouring to cure it.

THE TONGUE.—To this organ is assigned principally the sense of taste. Nature particularly protects all the senses on which the happiness of her creatures so much depends. In no organ is she more careful than in this; but if physiologists are to be relied on, she would be the most wantonly careless; but that she never is. The papillæ or red dots on the tongue, more marked at one time than another, have been hitherto set down as terminations of nerves. They are not so, as I have most distinctly proved, but terminations of arteries; in fact, small arterial bulbs, at the bases of which there is a little fosse or ditch, formed of the termination of the nerves of taste, so that these are not only nourished, but protected by the artery as well as the pile of the tongue. All matters to be tasted, if not actually sapid or moist, are made so by application to the tongue, and flow down into this little fossæ. The sense of taste is not confined to the tongue, for the nerve of taste seems largely distributed about the palate and mouth. The tongue as a mechanical organ is wonderfully useful. Its duty is to arrange every mouthful of food for the teeth to masticate, and to prepare and help to carry it to the throat. As an organ of speech, too, it excites our utmost admiration. It has, however, other noble duties, such as its diagnostic appearances in disease, a few of which are only recognized. I will not speak now of the new attributes I have discovered it to possess in this last field of its usefulness, but reserve them for another place.

In concluding this part of the subject relating to the head, I will reserve also my observations on its various divisions as diagnostic of disease in other parts of the body.

THE MUCOUS AND SEROUS MEMBRANES.—These have infinite uses, not the least is their elasticity to contract and expand. The mucous secretion is very abundant, viscid, and ropy, and protects the membranes from the action of the air to which they are always more or less exposed. After it is secreted by its proper glands it enters into the system again as an animal compound. It is highly organic, and becomes filmy when in an inactive state. Thus, all the tubes of glands after active use become filmy, as do the coats of the stomach when digestion is completed. This film is called epithelium, and illustrates the fact that in all cases where activity in any way ceases, Nature always has a tendency to organize her animal matter, and in all these cases gets an excess of acid in the system, which is as a matter of course *congestive*. In no parts is this so prevalent as in the mouth and throat glands, and the stomach, of which I shall treat more fully when I speak of disease. It is as much a protecting medium to the lining of the whole of the inside and every secreting organ, as the unctuous secretion of the skin is to the outside of the body. The decay and repair of these membranes are continually going on precisely as the external skin. The exposure of the skin to the atmosphere, though always exuding, makes it dry; the confinement of the mucous membrane, which is always exhaling, keeps it moist; but if it was exposed to the air it would also become dry. The one may be called a dry mucous membrane, and the other a moist skin. This is prettily defined in the lips, the redness of which is that part which is intermediate between the two, so that it is partially dry and partially moist. If we take the skin and mucous membrane as one organ, it is the largest of the body; but when taking the two separately, they constitute then the two largest. The SEROUS MEMBRANES perform secreting duties in their office in separating and keeping as distinct all organs, muscles, &c., and allowing them to play over each other.

The next portions of the fabric which command attention are —

THE NERVES.—Not a single part of the body is uninfluenced by these wonderful chords. Until lately no definition of their uses could be brought home to the popular understanding until the electric telegraph was discovered, which, wonderful as it is even now deemed to be, yet bears but a faint analogy to that of the nervous system. The nerves perform the electric duty to the whole body; the great central office being the brain, whilst hundreds, nay, thousands of stations of more or less magnitude are distributed all over it. The greatest, next to the brain itself, is situated behind the stomach, which has often been called the *abdominal brain*, from the quantity of nerve matter there collected. The name given to any collection of this kind is *plexus*, or *network*, or a mass crossed and intertwined; secondly, a *ganglion*, meaning a knot or small bundle, which is a smaller plexus. A great number of nerves going down from the head and neck and upper extremities of each side, and a number coming up from the lower extremities of each side, and meeting at a given spot behind the stomach, is called the *half-moon plexus*; whilst the union of these two is called the *solar plexus*. There are *ganglions* everywhere; not a half-inch length of nerves can exist without a number of these being collected together. No part of the body can be touched without its immediate appreciation at the head office. So wonderful does this appear that we can almost imagine a nerve leading direct from the part touched to the brain; but this is not required, for Nature provides even a more efficient power. A local influence has to be considered quite as much as a direct one, and this is exemplified by the recurrent action. It is this which gives and intensifies pleasure, and for a wise purpose, pain also. The use of the ganglions are evidently to strengthen the forces and convey the sensation through the plexuses; and as each knot or network is reached, renewed force is gained, and thus it passes through hundreds, or even thousands, before it reaches the appreciating or head office. It does not stop at these knots and networks; these stations are simply passed through. But then, again, they have a reflex function, which causes the sympathy of one part with another. The impression on hearing thrilling music vibrates through the whole frame; after tho impression on the head office has ceased, the twitching of tho limbs and vibrating of the nervous wires on the moro distant parts of the body, bring back again to the mind its pleasurable sensations. Now let us reverse this. Suppose we have a wound or sore; the pain is not only felt in tho part affected, but is sensibly appreciated at the head office. When the pain has ceased, the thought of it will sometimes bring it back again to its original part, of course through the same chords. Independently of this there is a local sympathy, for pain affects the nearest ganglions, and these again return the action, either prejudicially or beneficially. If the latter, it helps the curativo action; for it is to the strength and health of the nerves that we owe the power of healthy and obedient muscular action, and consequently proper and regular circulation of the blood. Thereforo a strong reflox action, which may in somo cases produce more temporary sensativeness to a diseased part, will in the end effect the cure quicker. It is this that often produces local sympathy to so large an extent as to deceive us in obscure diseases, leading us away from the true source of the ailment. It is, then, a wise act of Nature to have *reflex* actions, as no positive currents take place without being immediately followed by these, or, in other words, *negative currents.* Infinito wisdom could alone have designed ganglions and plexuses, to increase and further the impressions by the electric aura. Man's humble imitation of these powers in his discovery of the electric telegraph, is to have *relays*, which, when reached, intensify and pass on the force with renewed power. A succession of positive currents becomes weak; but, if a negative current is returned, which answers to the reflex action of the nerve-force, the next positive action becomes more powerful with precisely the same electricity used. All the actions of sensation and feeling in connection with this class of nerves, combined with those of motion, make up the grand total of all the phenomena we witness. The retention of sensational action in the great trunks of nerves from a number of remote ones, is often beautifully illustrated after the amputation of a foot or hand, by their feeling the apparent currents from those lost members. As the nerves are obliged to be well nourished, they are surrounded everywhere by their own network of blood-vessels. Whether it is from the space in which these move, certain it is that parts of the body, in disturbed conditions of the blood, suffer more than others. Congestive, as well as inflammatory conditions of the serous membranes, appear to suffer a greater intensity of pain than the mucous membranes. Thus the ball or globe of the eye will suffer more from either of these states than the white of the eye. The external covering of the lung, as in pleurisy, will produce more pain than in bronchitis, which is inflammation of the mucous membrane lining the lungs. So also with the external covering of the intestines in comparison with the internal coat; the inner membranes of joints, or those covering the muscles, in comparison with the external skin. I have often seen the mucous membrane of the large intestines highly ulcerated, a state that has existed some time, and then terminating the life of the patient suddenly : yet scarcely any pain has been felt by the patient, or any tenderness experienced on pressure of the abdomen when alive. If the serous or external membrane of the bowels be inflamed, even to a limited extent, the pain is not only intense, but external pressure not to be endured. All this is the result of what is called nerve force, and to be explained by the course and distribution of these wonderful telegraphic wires, and according to their positive and negative powers and capabilities of being acted on. Thus it is seen that any action occurring contrary to the true condition of health is conveyed and reflexed through the nervous system, or electric telegraph of the body. Any wound, blow, bruise, or concussion produced externally does the same; and lastly, that as the brain is the seat of thought, instinct, and reason, every effect arising from these, whether generated from within or impressed upon them from without, excites certain actions and sympathies through the whole nervous chords, positively as well as negatively, direct and reflex. We can thus see the whole force of what is called the ganglionic system. It must always be borne in mind, that no positive or current action occurs in Nature's telegraph or nervous system, without a negative or recurrent one following.

CHAPTER III.

THE CHEMICAL CONSTITUENTS OF THE BODY.

Bones—Muscles—Brain and nerve structure—Hair—Ligaments—Tendons—Cartilage—Skin.—The blood—Saliva—Gastric, or stomach acid—Mucus—Serum—Bile.—The urine and perspiration.—The animal, earthy, vegetable, and mineral matters.—The gases.—The atomic theory of combination of elements.—Gelatine—Albumen—Fibrine, &c.—The constant metamorphosis of structure, and great battle between the acids and alkalis.—Heat or caloric.—Blood-heat or natural temperature of the body.—Inspiration and expiration.—Pressure of the atmosphere resisted by the radiation of the body.—Man and animals are self-dependent beings to a large extent.—The Hybernators.—The first step in the self-dependent condition of animals.—The newly discovered membrane, or Rete vasculare.—All substances taken into the body have similar elements to those found therein.—Life and electricity.—The first great act of a separate existence is caused by the "Breath of Life," &c. &c.

EVERY part of the body, whether fluid or solid, has been carefully analyzed, and each resolved into its primitive elements of hydrogen, oxygen, nitrogen, and carbon; and, as these combine in certain atomic proportions, so solids, fluids, and gases are formed.

THE BONES.—The bases of these consist of the animal properties of gelatine and albumen; also of earthy matter, such as lime, magnesia, and soda, combined with phosphoric acid, therefore furnishing phosphate of lime, magnesia, and soda; or with fluoric and carbonic acids, and so taking the names of fluate or carbonate of lime, magnesia, soda, &c.

THE MUSCLES contain fibrine, albumen, gelatine, and a distinct animal matter called *osmazone*, to which all soups owe their peculiar odour and taste; besides phosphates of soda, ammonia, and lime, and sulphates of potass, derived from the large amount of sulphur which the body contains.

BRAIN AND NERVOUS STRUCTURE have also some of the above elements, with white and red fatty matter, whilst that in the marrow of bones is oily.

HAIR is composed of many elements—sulphate of lime, lactic acid, lactate, phosphate, and muriate of potass, iron, silica, and sulphur, all which give it its peculiar odour, while variety of colour depends on its oily matter.

LIGAMENTS, TENDONS, CARTILAGE, AND SKIN.—These are composed principally of gelatine and coagulated albumen.

THE BLOOD contains nearly eight hundred parts of water in every thousand. Its nourishing properties consist of fibrine, albumen, colouring, oily, fatty, extractive, and animal matters; albumen combined with soda, chloruret of sodium and potassium, alkaline phosphates, sulphates, carbonates, and subcarbonates of lime and magnesia, iron and peroxide of iron, urea, &c. Analysts are constantly finding other properties. Its colour is influenced by the action of the gases both in as well as out of the body. Arterial blood contains more fibrine and red particles than venous blood, the latter more carbonic acid and less oxygen. It is generally considered alkaline: its thick and fibrinous parts are presumed to be preserved in a liquid state by soda and ammonia. The blood may therefore well be considered a vivifying and revivifying element.

THE SALIVA is chiefly composed of muriate of potass and soda, sulphate, phosphate, acetate, carbonate, and sulphocyanide of potass, phosphate of lime and ammonia, besides albumen and mucilage. Its changes, from a direct acid to an alkaline condition in eating or fasting, have been noticed under the head of digestion.

THE GASTRIC, OR STOMACH ACID.—This is secreted chiefly in the lower portion of the stomach, and resembles free muriatic and acetic acids.

THE MUCUS, from the mucous membranes, is gelatinous, and of a saline taste; it contains, besides the animal properties of gelatine and albumen, common salt and water, muriate of potass and soda, lactate of lime and soda, and phosphate of lime. The quantity secreted along the alimentary canal amounts to many pounds in every twenty-four hours: some physiologists say as much as forty. This secretion protects the membranes from the air and from anything having a tendency to injure them. Being a highly animalized substance it organizes quickly, undergoes rapid metamorphoses in mixing with food and other substances, and much of its property is reabsorbed. It plays a prominent part in most diseases, and I believe health to depend more on its integrity of action than on any other secretion.

The Serum, from the serous membranes, has properties resembling the mucus. It is secreted largely, as its uses are manifest, and reabsorption of excess is constantly going on.

The Bile.—This is an alkaline secretion composed of albumen, resin, colouring matter, picromel, or a bitter-sweet substance, cholesterine, or a species of spermaceti or fatty matter, soda, phosphate of soda and lime, sulphate and muriate of soda, oxide of iron, and common salt.

All these animal, earthy, and chemical properties which constitute the elements of the body act on each other in every form of combination, having a constant tendency to reproduction. Solids, fluids, and gases are renewed, and those elements which are unfit to be retained, and which are always of an acid character and known as excrementitious, are thrown out of the body as excesses of what it requires. These consist of, first—

The Urine.—This contains urea, which is a compound of carbonate of ammonia and uric acid, which form urate of ammonia, and free lactic acid, lactate of ammonia, and animal matters, mucus of the bladder, sulphate of potass and soda, phosphate and muriate of soda and ammonia, earthy matter, lime, &c.. besides other substances.

Perspiration.—This contains muriate of soda and free acetic acid. All know the vast quantity exuded in violent exercise; but even when no exercise is taken, there is always an insensible action or radiation taking place over the whole body in a light fluid or gaseous form.

Thus we find that Animal Matters consist of gelatine, albumen, fibrine, osmazone, &c.

The Earthy Matters—lime, magnesia, ammonia, sulphur, silica, common salt, phosphorus, &c.

The Vegetable Matters (acid and alkali)—soda, potass, mucilage. resin, spermaceti, oil, acetic and lactic acid, &c.

The Mineral Matters—sodium, potassium, iron, sulphuric, muriatic, nitric, phosphoric, and carbonic acids, &c.

The Gases—oxygen, hydrogen, nitrogen, and carbon, &c.

The union of all these animal, earthy, vegetable, and mineral matters, and gases of all descriptions, produce all the chemical and chemico-vital phenomena we behold.

The most wholesome, nutritious, and beneficial things that the body requires to nourish or support it, with all those already present in the body, have certain atomic laws of combination, any addition thereto, or the withdrawal therefrom of any atom, might transpose a healthy combination into the most virulent poison. To illustrate this more fully, all chemical combinations are measured by the atomic theory of Dalton: thus, hydrogen stands as 1; oxygen as 8; nitrogen as 14; carbon as 6: so that by this rule their uniting powers are valued. Water, for instance, is composed of one part hydrogen and eight parts oxygen, or one of each, according to their value as a chemical expression. The following example will illustrate the composition of animal substances in every hundredth part.

	Hydrogen.	Oxygen.	Nitrogen.	Carbon.
Gelatine contains about	8	27	17	48
Albumen ,, ,,	7	23¾	15¾	53
Fibrine ,, ,,	7	12½	20	53½

If we take one equivalent of sulphate of potass at about 87, there will be 40 parts of sulphuric acid and 47 parts of sulphur; and if this substance is separated, the sulphur is sought by other acids, and the sulphuric acid seeks other alkalis with which it can readily combine; and this process is always at work in every salt throughout the body, and whatever affinity one element has most for another, the one yields and the other takes. Constant changes can therefore well be imagined. All living organic matter, however combined in definite proportions, cannot rest; but at every instant of life its variations are infinite, so that this perpetual giving and receiving, depositing and taking away, mixing and combining, form solids, fluids, and gases. These again, obeying the laws of their own elements, decompose and form other metamorphoses with the wear and tear of every structure of the body, and everything that enters therein, thus showing it to be always in a perpetual transition state. Life then, as well as all the bodily organs, being clearly dependent on chemical decomposition, seems to represent one great battle-field between the acids and alkalis in all their various combinations. Every fresh form they undergo produces another force, which is Heat or Caloric, than which nothing can be more important, as this affects all substances, and aids them in producing exhalations. The regularity or irregularity of the distribution of heat characterizes many forms of disease. Again, there is another act which is of the highest importance, and this is the elimination of the free gases in the system, which, in their combination with one another, produce both fluid and solid constituents and renewals of structure. It is not alone that the fluids act on one another, and on the solids, and *vice versâ*, and in their union produce gases, but that these gases act again on them, and on each other. So careful however is Nature, and so wonderful is her bounty, that exhaustion of her structures would soon take place if she had not a laboratory for the distinct elaboration of these vital gases. She has therefore assigned this to the Large Intestines, as I have previously mentioned. The body being everywhere porous, these gases find their way through every structure. Although the lungs produce the largest amount of carbonic acid gas, and consequently heat, yet this gas is also formed in the stomach. Caloric or heat is productive in health of a general warmth, and the blood heat or natural temperature of the body has been reckoned at 90°. Thus it matters not whether a man be living in the hottest or the coldest regions, the tropics or the poles, his animal temperature remains the same, and this is absolutely necessary to carry on the vital functions of life. Another great act is that of *inspiring* constantly the oxygen and nitrogen of the atmosphere, and *expiring* carbonic acid gas, or nitro-carbon. Again, the pressure of the atmosphere on our bodies is sixteen pounds to every square inch; still we have a greater resisting power in ourselves caused by all the vital actions, so that our evaporation and radiation is opposed to the gravitation and pressure of the atmosphere. We thus find man on the one hand a constant consumer of fresh aliment to renew his structure, and on the other we must be struck by the economy of Nature in making him a self-dependent being, in so far that he actually makes upon an average four-fifths of his own substance against one-fifth of what he takes to renew it. This will account for some of the wonderful phenomena we see and of the little food that will support life at given times; while at others, both man and animals may sustain life without food or drink for many days or even weeks; and also for the peculiarity of some animals called Hybernators, which live all through the winter without food or drink. As these are facts borne out by much testimony, I find that it has never occurred to physiologists to ascertain how the young of man and animals first derive their great self-dependent powers. As well may any one attempt to set up a great trade without capital, as to imagine an animal, especially man, being able to set up the great trade of life without capital to start with. While yet unborn there is life, but that is supported without food or air, and resembles in one respect vegetable existence, being a simple addition without waste; but directly he becomes a distinct atom, he inspires the atmospheric air, and waste immediately ensues; yet all the repair that is given him is MILK. Whatever this may be supposed to do, it cannot form the sole support of life, seeing that certain structures must undergo metamorphoses to produce others, and which would soon be exhausted, if there were not some temporary element or capital for this being to draw upon, before it could make a return to the system by what may be called the incomings or profit of trade.

This problem I fortunately solved some eighteen years ago, by the discovery of a distinct membrane covering the true membrane of the alimentary canal of the infant, and in fact the young of all animals, and which, like all Nature's acts, served more than one great purpose. Thus before birth this membrane offers a mechanical obstruction to the absorption of anything from the alimentary canal into the system, whilst after birth its decomposition produces the first natural animal substances and gases, which sets the machine chemically at work, thus constituting the first great capital of life. This membrane lines the whole alimentary canal, and therefore covers and protects the true mucous membrane beneath it. The tube itself has within it a stuffing called the Meconium, which keeps it open, and this stuffing is enclosed also in its own peculiar envelop or MECONIC MEMBRANE. This of course lies on the new membrane, which I named the RETE VASCULARE, meaning a network of blood-vessels. Soon after birth the natural stuffing or meconium comes away, leaving the new membrane to be acted upon by the food and air, which gradually decompose it. The great amount of animal matter evolved in this process is that which sustains life with the small assistance of milk. In course of time this membrane becomes entirely absorbed, having served its wonderful purpose. The first portions that decompose are those situate in the stomach and small intestines; so that the absorbing vessels of these latter are set free to take up the new elements along with those which the littlo body itself has yielded. The last parts that remain of this wonderful provision are those which aro situated in the large intestines, thus bearing out the fact of the great use of theso in generating and retaining the larger amount of animal or vital gases. The account and uses of this membrane I published in 1815. This, then, I consider the starting-point for all those great chemical actions which usher in the beginning of life, until the whole of the bodily powers can be brought into the working train of the great wear and tear and repair of it as I have previously described. Without this provision no infant life could be at first sustained. It could not resist without this the waste that immediately ensues with even the first breath, and no amount of aliment could support it; more especially when we consider that all that infants have is milk, and that their stomachs are mere bags or gangways for this to pass through. They have, moreover, no digestive apparatus, and this fact will show the folly of giving them anything but fluids. If this is done, it subjects them to fits, which are purely and truly infant apoplexies. All animal substances taken into the body as diet are therefore similar to those already in the body; all vegetable substances contain properties that support animal life, consequently have similar chemical elements.

Air, earth, and fresh and salt water support both animal and vegetable life. Air, which has four-fifths nitrogen and one of oxygen, is constantly exhausted by its natural consumers, animals and vegetables; while these latter yield again to the air properties for its renewal. Vapours and exhalations from the earth and waters also contribute their elements, so that the air always keeps a natural standard of organic life peculiar to itself. Water, and all fluids of which it is naturally a basis, have analogous laws. All animals consume air and water, besides animal and vegetable matter. One great principle of their organic and chemical life is to deposit at certain parts of their structure the elements peculiar to these parts, such as bony matter for bone; muscular matter for flesh, &c.; whilst the glands and membranes secrete their own proper fluids, and whilst life lasts this combined organic whole yields four-fifths of their properties towards its own support. Vegetable life receives one-fifth of its sustenance from the earth and air:—from the former it takes its alkaline, and from the latter its more organic or acid elements. It then capitalizes its fructifying sap or juices, and thus supplies four-fifths of its own vital existence. The earth itself having first, by apparently similar laws, converted all organic matter into a purely alkaline humus, is thus fitted for the support of vegetable life. Thus all organic matter has excess of acid while living, but after death, alkaline predominates. We find the worm tribe living on and consuming this purely alkaline substance; yet in themselves obeying the same laws of all organic or animal life, in being four-fifths self-dependent beings.

Life, then, as far as human intelligence has arrived, appears to rest on chemical bases, and thousands of laboratories are always at work to produce and sustain it. The chemical actions have specific influences on certain chords, which are the nerves, and by every known power that produces either electric or galvanic currents out of the body, produces the same within. There is the friction of the circulation through the blood-vessels; of muscles on each other; organ against organ on the one hand, and the union of acids with alkalis on the other; all producing electric and galvanic actions even before the birth of the embryo. But that which sets everything in a higher state of vital energy is the moment of birth, when the air first gets into the lungs and develops their action.

Then commences the most rapid process of electric power; the friction of air and the double action produced thereby; the blood becoming oxidized to circulate throughout the body, and the evolution of heat with every inspiration producing carbon. This is the moment when the electric current has a specific influence on the instinctive and reasoning powers, and, in addition to the forces so lately in a negative state, not only becoming positive, but the nerves for the first time, through the agency of breath or air, becoming sentient. Until the air or '*breath of life*' has entered into the body, it is a question if there be any sentient feeling, though we know there is motor or moving action. The effect of the air being thus wonderfully shown, the electric currents from ten thousand batteries keep the nervous chords or telegraphic wires of the body in constant action; while the nerves themselves evolve their surcharged currents in force throughout all parts. Whilst life exists their agency supports it, for without them the vital current could not be maintained to urge all the powers into continued action. Observe the plexal and ganglionic system of the nerve apparatus, see how they are charged: ten thousand Leyden jars filled with electric matter could not supply the vital forces they do: as many galvanic batteries, with acid acting on zinc plates, could not perform the duties of the acids of the body on even the alkaline substances of the bones: no amount of electrifying machines could produce electrical actions equal to the friction of the muscles and organs, with the circulation of the blood through its vessels: nor would twenty millions of all these combined be able to produce those wonderful agents, called instinct, and reason, on any known matter whatever. This is only due to the vast combination and millions of changes that living animal matter undergoes, which no chemical analysis can ever reach; which gives the brutes their instinct and man his reason and his vast variety of thought and mind. He gains electricity from light and air,—he forms it in every action of his living body,—he retains it in every nervous chord,—he increases it by every sense of sight, hearing, smelling, touch, and taste. He imparts a force to it by every emanation of his mind; it feeds on what itself produces, and increases the more he uses it. Energy and exercise help to fabricate it, thought to strengthen it, and education and high cultivation to purify it. It is an essence that makes his human soul or mind under his own management and direction; with it, he is a free agent,—for no one knows his thoughts; yet only held in trust during his mortality, and when that ceases, it flies with all its essences, good and bad, to Him who first gave that 'breath of life,' part of Himself. If I were called on to say what two powers most develop the human mind, and in their freedom exalt it, I should name civil and religious liberty of thought, for with these everything can follow in their train.

My reader will now see that before he could possibly understand any fact in relation to health or disease, he must have some knowledge of his body, its composition, its organs and their uses, and some general information on the laws of life.

CHAPTER IV.

HEALTH AND DISEASE.

The body commercially considered.—Arbitrary standard of health, namely the predominance of acid in the system.—First blood-poisons produced by excess of acid over their natural predominance.—Hygienic conditions for health; proper and sufficient food.—Mental exercise.—Healthy and diseased minds.—Bodily exercise necessary for health.—Ablution and cleanliness.—Baths and bathing.—Infancy and age.—Pernicious use of the foot-bath.—Good air and free ventilation.—Disease; excess of acid elements producing congestive actions—Rheumatism—Gout, and Rheumatic-gout—Plethora—Skin eruptions—Croup—Whooping-cough—Poisonous elements in the blood—Small-pox.—Excess and deficiency of blood-elements produce their distinctive diseases.—Errors in making disease specific.—Specific disease is Nature's effort to relieve general disturbances.—Received authority, or Empiricism now usurps the place of fixed principles in medicine.—Whatever disorders the system labours under, its general condition must be ascertained, whether congestive or acid, inflammatory or alkaline.

Having reviewed the various structures of the body, and their chemical properties, suppose we were to speak of it commercially as a ledger. Our first duty would be to see how the balance stands between its incomings and outgoings, and the value of its trading property and effects, and what constitutes a credit balance or a deficiency. Anything beyond a proper balance, being excess, must be withdrawn as not being required, and any deficiency must be supplied by a reserve fund. Without this inquiry, it seems impossible to understand the general economy of the factory; when to withdraw or when to add to the working agents. It is seen to have both goods and capital to start with; four-fifths of which are manufactured within and one-fifth only received as raw material. The principal working capital is its *acids*; the raw material, and that which is already present, are its Alkalis. A healthy condition of the whole can only exist by a PREDOMINANCE OF ACID OVER THE ALKALINE ELEMENTS; and so long as this continues in such due proportion, all the vital duties are carried on with integrity; ample provision being made to carry off excessive accumulation of acids by proper machinery, such as the skin, kidneys, and other excretory organs. This fact must be fully recognized; for this simple reason—that when deficiency of acid exists in the body, fevers and inflammation are the result, and the skin and kidneys cease to act, or act but feebly. That the condition necessary for health may exist for many years without any derangement, is amply borne out by persons who have never been known to require medicine for either of the conditions above stated; consequently have had no disease whatever during a long life. Others again have only needed the slightest artificial assistance; whilst a third class are always out of order. An arbitrary standard of health must form the elementary basis for everything we see in connection with the body; but though so much has been written on all its wonderful properties and diversities, no one has hitherto established any broad principles on which it must depend. The body, as the analyst reveals it to us, presents almost every chemical property and action we know. It is entirely owing to fixed and immutable laws that the chemist can know anything. Men may differ and may err, as we see they constantly do, but there is One that never differs, never errs. What then regulates the chemist's proceedings? What powers and what elements does he use? Why those which produce every constituent part of the body, as well as what regulates them when produced, or what governs them in life, in health, in disease, in decay, and death. He has his arbitrary standard of proceeding in all his manipulations. He furnishes his laboratory with acids, alkalis, and neutral agents; with heat, with electric and with galvanic powers: by certain defined rules and theories, he becomes acquainted with the mighty workings of the chemical and electrical forces: he communicates his thoughts, his ideas, and his commands to the greatest distances, simply by means of a wire, sulphuric acid, and zinc plates. If he were asked what were the chief elements whereby he works and solves all his problems, his answer would be, by his acids. In all his manipulations the predominant use of these agents is apparent.

Why has he never seen this in the vital economy? The healthy condition of a long life (after the epoch of infancy has passed, which may not have been exempt from disease) depends on some fixed principles. Infant life cannot be supposed to escape disease, and it shows how soon the system may get an excess of acid over the necessary quantity. The blood exhibits this by some elementary poison so produced, which declares itself in the form of red-gum, or small red spots covering the bodies of infants. The next result of this blood-poison is small-pox or measles; the one being the natural act of getting rid of it through the skin and capillaries, the other, through the venous system in the lungs.

Jenner discovered by accident that the blood-poison of small-pox was controlled by destroying its grosser principle by another; thus preventing a loathsome disease. No other disease has been similarly prevented, nor do I think it ever can be. Measles cannot, nor can scarlet-fever, nor cholera. What may be called the choleraic-poison, or measles-poison, or fever-poison, may be sought for long enough; for none of these are of so specific a character as that known as small-pox-poison. Therefore, the infant, subject as it is in the best hands to certain diseases, and recovering from them, takes its stand in the world as a comparatively healthy atom. As long as the warehouse is supplied with good and sufficient raw material, and the manufactory within maintains the proper balance of its elements, so long does health exist.

There are, however, certain conditions to be fulfilled. Diet must be attended to, as well as air and exercise, and what is of the greatest importance, the due cleansing of the body. The proper time for taking food depends upon the occupation of every person: the regularity is not of so great importance as the quantity and quality taken in every given twenty-four hours, so as to repair according to the waste. Sometimes more, sometimes less, may be taken or be required, according to circumstances. The worst of all principles is that of the dietitian, who eats and drinks by rule; so that one day he ceases to repair waste, at another he feeds when it is not required. The stomach should never be paid by instalments; it is a good and useful organ, and therefore should always be satisfied in full of all demands.

Mental Exercise.—One great inducement to health is occupation. No man should be without employment, professional or otherwise. If he be independent, he is most unfortunate if he cannot make an occupation that will command a due portion of his time every day. The body being employed, the mind always accompanies it; nevertheless, the mind should have an additional occupation of its own. It should be cultivated and stored with useful matter; for unless it is so, it falls into the great error of idleness and frivolities, and leads the body into sloth, and often something worse. A lofty mind will always be based on due principles of religion and usefulness. A debased mind, having eschewed these, becomes defective in every relation of life. A well-regulated, well-stored mind becomes strong, and can judge dispassionately; is satisfied and reasonable in all its desires, and is healthy. An ill-regulated mind is never satisfied, but tossed about by morbid influences, and therefore is diseased. The body may be healthy, but thought and imagination often cause it to droop and lose its vigour, and if this continues, no food nourishes it. The mind must cure itself by all those arts which it can alone engender from its own resources. A rational enjoyment of life in the happy unanimity of body and mind, the one producing health to the other in turn, constitutes the perfection of a tranquil existence. A laudable ambition, coupled with great industry, will often attain the end sought after; but if they do not, the purpose is answered in one way at least by the right usage of time. Non-success should never discourage any one: the greatest men, and those of high aspirations, have often the hardest trials and most disappointments, of which the plodding and unambitious know nothing. Many have the desire for fame or position, but not the necessary mental qualification to gain them; others that strive for these may not be sufficiently persevering, and so lay down the load by the wayside, whilst the persevering carry it on to the journey's end. Society is pleasing and necessary, because it leads to diversity of thought and ideas, and like judicious study and reading of books of information, much wheat may be gathered from many stores. The recluse often misses the opportunity of improvement, which comes through the contact and influence of others. So complicated and subtle is all that relates to mind and matter, that we can only see facts to wonder at them, without the remotest chance of tracing their deeply hidden causes. Thus a powerful and brilliant intellect may accompany an equally strong physical frame; it may also exist in a weak one; whilst the strongest body may have the weakest intellectual powers. Nothing seems incompatible with nature. So much can be said on this, that it is difficult to stop short in the course of reasoning on the subject. The condition of the mind is a prime element of health; because it keeps everything in action, through the electric wires or nerves. Early education in directing the mind, and afterwards the employment of it, in all the duties of life, from the lowest occupation to the highest, in all their intricate varieties that the genius of man can devise, are influenced by industry and perseverance.

Bodily Exercise.—This is next in importance; for as the mind is the governing power, so exercise is the mainspring of the motive power. Heat, one of the greatest vital agents, is engendered by it; elements produced in excess by the body are more quickly evolved, and chemical metamorphoses and combinations induced. Those who in the absence of exercise would become inert or in a morbid condition, are roused, yield their nutritions elements, or part with their more excrementitious ones more readily; many of which fly off in the form of gases and others in perspiration; thus keeping the pores of the skin open and the whole body in an elastic muscular tension. This may be witnessed by the open gaping wound made by a sudden deep cut in the living flesh; no such thing occurring in dead flesh. It is clear that muscular activity acts first mechanically, then excites the chemical and electrical actions in all parts of the body, and while it rouses beneficial actions, it removes morbid elements; consequently produces health; whilst idleness and sloth engender disease.

Ablution, or Cleanliness, is another great health-producer when practised in every reasonable and seasonable manner. It removes saline particles, the bases of which are acid, oily fatty matter, and organized deposits from the skin itself, which would block up its pores and check radiation or perspiration; thus throwing back into the system excrementitious and acid matters. With respect to the varied means of ablution, a few words are necessary. It is not every one who can stand shower-baths, plunge-baths, cold baths, sea or river bathing, the air-bath, or perfect denudation. No specific rules will suit everybody; for all have what is called an idiosyncrasy, or character of system, peculiar to themselves, which is regulated by their own organic powers. I have seen many diseases of the heart and head produced by injudicious ablutions, both from hot as well as cold water. The reasons are simply these: that when a person is stripped and applies cold water suddenly all over his body, the blood and heat of the surfaces are driven to the centres. The benefit should therefore arise by the centres throwing these back again to the surfaces by the reflex functions, assisted by the process of rubbing and towelling, producing a return glow. But suppose they do not, as is frequently the case, the internal organs become depressed by a mass of congested matter, from which they are unable to free themselves for many hours. The heart cannot propel the blood fast enough; the glandular secretions are retained in their organs; the mucous and serous membranes become congested; and not until exercise has resolved these, and brought the heat and blood again to the surfaces, does the system recover a freedom of action. What is likely to be the result of this, even on the healthy system, if persisted in? Some organs must soon show it, and no part sooner than the heart. This organ, having the greatest amount of work to do, succumbs, and though it might have continued perfectly healthy without this strain upon it, it becomes first mechanically injured, and then takes on specific disease; a penalty too great to pay to fashion or to morbid ideas of cleanliness. In some persons the blood will rush to the head, and cause the curious sensation of this organ being three or four times larger than natural, and unless this morbid effect be quickly reduced by active sweating, permanent disorders may ensue. The greatest circumspection in these matters should be used in *infancy* and *old age*. Infants should never be washed except in warm water, and then their bodies not exposed to cold air. Their circulation is carried on more actively externally, and their greatest heat is on their surfaces. To check this is one of the most fruitful sources of many of their ailments: ignorance first producing disease, and then folly endeavouring to cure it. A simple philosophy would save both. Keep them externally warm, their diet light and fluid, and nothing to strain their *infant* internal organisms; but if cold drives the heat to the centres, and the internal organs become clogged or congested, ask the question—How can they conquer this with their extremely limited powers? I need not say that fatal seeds are thus early sown in otherwise healthy systems. Glandular enlargements are induced, which never ultimately yield; strumous or scrofulous tendencies are produced, and if they survive, it is only to witness these latent actions developing themselves in that fatal malady,—CONSUMPTION. Old age cannot resist the cold: this may be perhaps more readily understood from being more apparent. An activity of mind, with warmth and nourishment, may keep the aged body in health; but here exercise and cold take too much out of it.

There is another act that militates against health in the matter of cleanliness, and that is the pernicious use of the foot-bath. Considering the uses of the feet, I must say I think them very badly treated. Shut up as they are, they should be more thought of and cleansed, on the same principle as the hands; not put only occasionally into hot water, and parboiled. Nothing is so injurious to them, or more pernicious to the system generally. In females I have seen the greatest evils result from this practice, producing the very reverse of what was wished or intended. In a state of health a hot foot-bath will in some cause and keep up the condition of what is called tender feet, and in others it produces a more or less morbid condition of the brain.

For the purposes of health, let the feet be washed one at a time, with cold or tepid water, with a sponge and plenty of soap, and not put into water at all. The greatest comfort will arise in the performance of this act every day; and evils not suspected to have arisen from the foot-bath will be avoided.

Good air and free ventilation of dwellings, especially sleeping-rooms, are necessary for a healthy condition of mind and body. All have experienced the close smell of a bedroom in the morning, however well ventilated; this arises from the body being more freed from covering, and the increase of natural exhalations from a long-sustained warmth, as well as from the carbonic acid gas from the lungs. As long as the skin is whole, and no wound or sore present, every vital agent undergoes a regularity of the transition state; but if a wound, or sore, or ulcer exists, and remains unhealed for some time, every one knows how perceptible is the animal matter or discharge therefrom. This is at once a proof of the necessity of keeping the body in a sound state. 'Life consists not in living, but in health.' 'A sound mind and a sound body,' and with these the full enjoyment of them. Nature is bountiful, and provides even for our excesses. Taking occasionally more than is absolutely necessary often hastens the secretions and excretions of the body, and rids them of morbific matter; but to do this habitually produces disease. The same in this as in mental and bodily exercise; the capabilities and powers of the body and mind are not brought out except on emergencies or excesses.

Vitality consists in the constant regularity with which certain active predominant elements act upon passive ones of an opposite character, and constantly reproducing them by a regular and incessant metamorphosis. It is by the regularity and integrity of these actions that the body is kept in health. To use a homely phrase, there must be a constant supply of oil and wick in due proportion for the great lamp of life to burn with regularity and vigour. Disease, however, abundantly shows that there may be plenty of oil at one time, and no wick; or wick enough at another time, and no oil. The actual meaning of health implies uninterrupted action in the production of everything that conduces to it, whether from within or from without; and it does appear that some one force must predominate, or no changes would take place at all. So great are the forces of the living body, that in a vacuum they would burst and fly away, no one knows whither; but in the medium of the atmosphere, whose pressure is sixteen pounds to every square inch, they exist within bounds; but are nevertheless the greater of the two, or they would be crushed. The state of the atmosphere has therefore an important action on the body as well as the mind, producing at one time a depression, at another an elasticity, within it. Health should not therefore be viewed from its effects, but from its causes; disease must also be measured by the same rules.

Disease has never been properly understood. This has arisen from the want of a theory or chemico-vital standard of health. Having already explained what I consider this to be, I am compelled to lay down the rules for the first departure therefrom, without which it is utterly impossible to treat disease otherwise than empirically. In fact, the very first link in the chain has always been wanting. Our duty now is to trace the first steps of disease, because the remedies which we apply must either do good or harm, increase or diminish it. The first departure from a healthy condition consists in the system generating more acid properties within it than it requires. The first acts of disease do not take place by diminishing the acid predominance necessary to the healthy state, but by adding to it; and this arises from the system failing to get rid of surplus secretions and excretions quick enough. They consequently become more or less organized within it. This effect is first shown on all the mucous surfaces, producing a congestive action, affecting more particularly the blood in the venous system. The parts first affected being the stomach and upper part of the respiratory organs. When the excess of animalized matter, with its attendant acid action, is inordinately set up, the absorbent vessels endeavour to remove as much of it as possible. They consequently do so, and carry it to the right side of the heart, from whence it is propelled into the lungs. The lungs endeavour to purify what are now blood elements, but cannot do this completely; they therefore become themselves congested, and are thus involved in the first step to disease. This is beautifully illustrated by Glossological indices, as will be hereafter mentioned. These actions may show themselves, first by a little dyspepsia or indigestion,—a loathing of food,—a nauseous taste in the mouth, accompanied by a phlegmy state of the throat; an expectoration is set up, which did not previously exist; a thickening of the mucus of the nose; a singing in the ears; a dullness in the head, or what is called sick-headache, especially at the back part, and many other little ailments. Suddenly, something that has been eaten, some little mental excitement, some more active exertion of body, and all these symptoms may disappear as they came. Many of my readers have no doubt experienced these inconveniences. The second is an increase of this congestive acid, or venous action, which will choose its locality to exhibit its effects, either in the serous tissues, and so produce rheumatism and various stitches and pains about the body; the extensive range of which, from a simple toothache to the highest condition of suffering, seems to be boundless. Congestive action occurring in the mucous membranes of the lungs produces bronchial congestion, attended with cough; or some other organ may exhibit congestive action, such as the stomach, which may not from this cause perform its duties properly. These elements of congestion, which existed only in the venous blood, now find their way into the arterial circulation, pass rapidly through the system and exhibit themselves in the capillary circulation, and a certain plethora is the result. A morbid stoutness arises in some, in others increased rheumatic tendency ensues, which goes quickly into gout in men, and rheumatic-gout in females. In another class these congestive elements become eliminated through the pores of the skin, and, instead of healthy perspiration, produce a skin eruption without feverish action, such as chicken-pock, in the pustular form, or a host of rash-like appearances; or, if attended with fever, then measles, or some other state of feverish congestive action, with or without eruptions. These acts are Nature's own efforts to cure, by throwing out of the system its morbific matter through the outer skin; whilst the secretion of the inner skin, or mucous membranes, may become organized, and attach itself so closely as to become the cause of croup and whooping-cough.

If these congestive actions, which are of an acid character, germinate, which they do, they produce as poisonous an element in the blood as any that can be taken into the system directly, for these are generated under precisely similar conditions. This self-generated poison being set up, may terminate in small-pox; but if the individual has been vaccinated, and the protecting virus is still present as a blood-element, it destroys the more potent poison as fast as it is formed. Hence the value of Jenner's discovery. All this, however, shows the result of excess of acid elements in the system beyond what the alkalis can neutralize; and so all the primary diseases, short of the direct inflammatory actions or fevers, are produced.

There is a prevailing fact throughout the system, that wherever blood-elements are sent, each part uses them after its own law. In the muscles, animal matter and flesh are taken from them in preference to any other; in the bones, bony matter: in the brain and nerves, their peculiar matter; and in the secreting organs, whatever their duties are, whether to form saliva from the salivary glands, mucous and serous matter from their distinct membranes, bile from the liver, and so on. If these elements be in excess of the wants of the organs, or if they cannot appropriate them, accumulation takes place, and an enlargement or disease of a congestive character is the result. On the other hand, if these organs or parts do not get their due share of elements for their proper renewal—decay never ceasing by a wise law—they become, of course, powerless, and this gives rise to the wasting diseases. The system not obtaining its due nourishment from itself, or its four-fifths benefit, it is in vain that the one-fifth of new matter is taken into it; we inevitably find that blood waste, or want of blood, or what is called anæmia, follows. The first processes of disease in the system must be governed by a law, and that law is functional disturbance by aggregation. If this is subdued, either by natural or artificial means, the system returns to a healthy standard; but, if not, then every day, insidiously and in such way as no human eye can detect, the highest congestive disease is reached. No organ in these conditions can possibly perform its duty regularly, all and every one being overloaded. At this point comes the touchstone of true science in medicine; and here it fails, because it is purely empirical, wanting its true basis of action.

Hence disease is often confirmed in the body by the purest efforts to alleviate it; for the next step is, that one organ weaker than the rest, yet vital to the whole, by a misapprehension of first causes, becomes irremediably deranged, and life is lost. This is no fiction. Such a state cannot be rehearsed; it cannot be put back to the first condition to be treated differently; but, even if it could, the same liability exists, for, instead of viewing the whole case as a general functional disturbance, some specific disease is looked for, and as easily found. Even when found, then only general treatment, with the assistance of all other organs, can restore the one that is singled out as really and truly most affected. In these cases where specific-disease hunters follow their bent, one will declare the heart most at fault; another the liver, and this sect are the most numerous; a third, the kidneys; a fourth, the lungs; and so on. This is the great error of the age, combined with the accompanying hallucinations in treatment. That specific diseases exist there can be no doubt, palpable as Macbeth's dagger. They come before us without any mistake in their identity; the result of neglect in the patient on the one hand, or produced by medical errors on the other. Primary disorders in the system are either checked or aggravated by a variety of means. It cannot be supposed that Nature herself is indifferent or careless in the matter, for she always strives for health and life, and will keep them both as long as she can, the latter even in the highest state of disease. To do this she often seems to act unwisely, but this she never does, for all her acts are under, and in obedience to, given laws. As no inflammatory actions can take place, either locally or generally, without the previous stages of congestive ones being more or less unbearable, Nature will make one organ the scapegoat of the rest by a specific inflammation; or she will involve the whole in the great *mêlée*, and produce an inflammatory fever. The former is the milder way of bringing all the congested organs to the help of the one inflamed. The latter is an attack on all of them at once; for by a sudden chemico-vital action she carries off not only all the excess of acid elements from the system, but even the *predominance* necessary for the health of it; the result being arterial fever. Disease then becomes removed from the venous circulation; it is no longer acid or congestive, requiring alkaline elements for its reduction, but is in an engorged or alkaline state, requiring acid remedies. In local or specific parts a bronchial congestion will be suddenly converted into a bronchitis—diseases opposite as the poles. In the general state, instead of measles, we have scarlet-fever; instead of congestive, we have inflammatory fever; instead of congestion of mucous membranes of the alimentary canal, we have inflammation of them; instead of congestive, we have inflammatory cholera; in fact, everything is changed, both of these distinctive conditions requiring equally distinctive remedies. If they do not get them, but rather if the remedies are reversed, the patient dies. If by lucky chance he lives, and returns to that state such as I have described as being health, no one knows anything more about the fact than that, by hook or by crook, the patient is better. But what shall we say of all the thousand sufferings and symptoms which all these things have exhibited? What a mass of learning and knowledge, and squabbling and wrangling, have they not brought forth, of what has ever been said, written, or done in their ever-varying, ever-changing mode of treatment! It would really seem enough to puzzle any one even to remember every authority on the subject, and which, in fact, reduces medicine to a vast effort of memory to which no man can hope to attain; and thus it always will be whilst no distinct or fixed principles exist. No wonder no two opinions agree; no wonder that no two hospitals, with all their staffs of physicians and surgeons, teach the practice of medicine alike; no wonder one man starves and bleeds, and another stimulates in the same diseases. All is matter of opinion! Yet no blame can attach itself to any one; simply because truth is yet undiscovered. Verily a revolution is required here.

Every part of the body being liable to disease, such disease is called FUNCTIONAL when the secretions and excretions generally are out of order, and no particular organ affected beyond a disturbed condition. Disease is called ORGANIC when some organ is actually the seat of disease, or so seriously affected in its general character as never again to be reinstated in its former integrity.

The skin as an organ becomes diseased by many forms of eruption, some of which arise from the system itself throwing out morbid elements of the blood through it, such as small-pox, chicken-pock, erysipelas, &c. Other forms arise from the skin itself, such as from ulcers, wounds, and sores of various kinds. However, let what will happen which is contrary to health, it is incumbent to know whether the general system itself is in a CONGESTIVE or ACID state, or in an INFLAMMATORY or ALKALINE one; for on this knowledge the treatment must be based. This of course comes under the head of DIAGNOSIS, or the finding out of disease.

CHAPTER V.

DIAGNOSIS, OR THE ART OF DISCOVERING DISEASE.

General investigation of the whole body, its appearance, &c.—Auscultation and sounding of the chest, hereditary taints, &c.—The tongue and head.—Importance of the tongue.—Discovery of a system of Glossology; law of diseases evidenced thereby.—Its divisions or tracts.—Laws of the fouling and cleaning of the tongue; showing that the instinctive or sensual organs are always most affected and easier than all others to be remedied.—The large intestines and brain the last parts affected in disease and the first to be restored to health.—The tongue classifies disease into the distinctive character of the prevailing elements which produce it.—The head and its divisions.—Advantage in discriminating headaches and their localization to various parts of the body.—The tendency of Glossology to the more perfect agreement amongst medical men in the treatment of disease and the discomfiture of quackery, placing science in its true position.

A PERSON suffering under any malady always shows it more or less in his general appearance. His complexion and general colour and condition of skin; the state of his body, whether plethoric or emaciated; and its movements, whether excited or sluggish; the regularity or irregularity of his pulse denoting the state of the circulation of his blood, are all duly noticed. By auscultation and percussion, or the sounding of the chest, disease may be discovered in his heart or lungs. Hereditary taint and other causes are investigated, and in addition to all these his own sick-tale is listened to. Chemistry also aids discovery of disease by the analysis of the secretions and excretions, and of morbid formations; such as the difference between mucous and purulent matter; the character and specific gravity of the urine; the structure of tumours, discriminating those of the organic or fatal, such as cancer, from those that will not affect life. Every mental and nervous action, whose name is legion, is duly noted. All these confuse and frighten the non-medical public, who are often led to imagine they have every disease under the sun. There are so many symptoms in common with the most simple functional disturbances and the highest disease, that they cannot discriminate them; therefore form the most erroneous opinions. It has been recorded of a hypochondriac, who read half a page of symptoms, and declared they were all that he suffered at various times; but on turning over the leaf he found that they were all symptoms of pregnancy! The investigation of disease is at last summed up, along with the life, habits, and employment of individuals. There are, however, two parts of the system that present diagnostic appearances which have not hitherto been so fully investigated as they deserve, namely:—

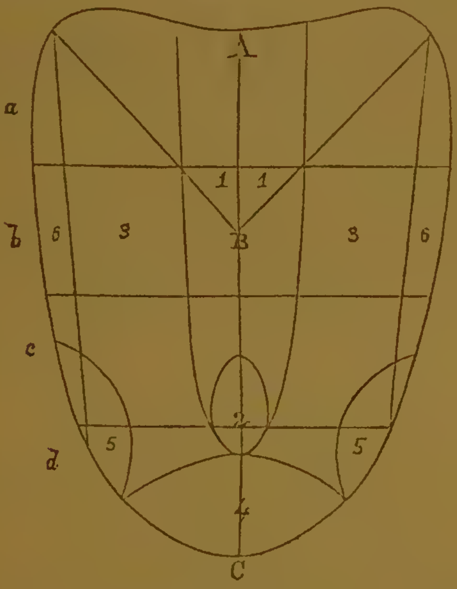
THE TONGUE AND ITS APPEARANCES, AND THE HEAD.—To these I will direct especial attention and point out facts on which our medical works are now silent. The tongue shows on the one hand the law of progress and retrogression of disease; what parts of the body are primarily and more frequently affected by disease, and have consequently the best chance, from natural circumstances, of coming under the more immediate control of remedial actions. On the other hand, that Nature has unity and design in this, as well as in preserving certain organs from the inroads of disease, which are evidently of the highest importance to her welfare generally, but which, when implicated by a general disturbance of the whole system, are the first to recover a healthy action.

I discovered more than twenty years ago that some of the most important organs of the body had a local position on the tongue; so that whenever disease of a distinctive character occurred in them, the corresponding portion of the tongue pointed it out. These new powers I named GLOSSOLOGY. I found that the tongue also indicated what I may call the state of the electric and galvanic batteries of the system; whether there was excess or deficiency of acid, and whether congestive or inflammatory actions predominated. Not only this, but it developed the laws I have already laid down for the causes of health and those which seemed to regulate disease. The fouling and cleaning of the tongue exhibit the most marvellous order and arrangement; whilst the crowning benefit consists in pointing out the form of remedy to be used in all distinctive diseases, as well as those which were not so distinct, but which may be truly termed occult. In all cases lessening considerably the error in the administration of remedies, and removing a rock on which the practice of medicine has hitherto stranded, and the health and lives of the public miserably wrecked.

The Tongue and its Divisions, or Tracts.—Whatever may be learnt by all other symptoms and forms of diagnosis, I consider the tongue as claiming a priority over all.

I will therefore briefly map it out, and show the Tracts which correspond to certain organs of the body.

Fig. 1.



The line down the centre divides the tongue into two symmetrical halves.

1, 1. The Respiratory and Lung Tract; from the throat to the termination of the air-tubes at the extremities of the lungs.

2. The Pleural Tract, or external covering of the lungs and internal walls of the chest; the general seat of Pleurisy.

3, 3. The Stomach and Digestive Tracts, extending to the termination of the small intestines.

4. The Large Intestine Tract.

5, 5. The Kidney Tracts.

6, 6. The Brain Tracts.

The heart, or great centre of the circulation, has no distinctive tract, but takes in the whole tongue. Some of its diseases, as well as its conditions irrespective of disease, are indicated by a chapped and fissured state of the surface.

A B is the posterior third of the tongue, which is the muscular portion; from which its great power is derived for protrusion and withdrawal, more especially in animals.

B C, the anterior two thirds of the tongue is more flexible, in order to turn the food about in the mouth, to assist speech, and wherein are situated the RED PAPILLÆ, or organs of taste.

We thus see a distinct division into MOTOR and GUSTATORY, or moving and tasting portions. The difference too in the quality of these parts, and also in their appearance, are clearly defined in the usual ox-tongues that come on our tables. The whole surface of the tongue is covered with a thick membrane, on which are little white dots or eminences, known as the pile. It is the growth or elongation of these that gives it the appearance of being coated or furred, and they both grow and die off most rapidly. It is to this fact that the general condition and state of the secretions of the body can be so readily discovered. It is therefore of the greatest importance to notice if this coating or fur covers the whole of the surface, or one part more than another. Hence the advantage of ascertaining on which of the tracts this occurs, or if any tract be entirely denuded of fur whilst others are covered.

The prominence or distinctness, or even perfect obscuration, of the red dots or papillæ, or arterial bulbs having the nerves of taste at their bases, exhibit the state of the circulation of the blood.

The transverse lines divide the tongue across into four parts; each division showing what organs or parts of organs are included therein of each tract.

a. The mouth, throat, and windpipe, to the lungs.
  The salivary and all other glands about the mouth and throat, and the whole length of the gullet.
  Portion of the posterior or smaller brain.

b. The division of the windpipe into two parts; being the commencement of the bronchial tubes, with all these to the centre of the lungs.

The largest portion of the stomach.

The remaining portion of the smaller brain and part of the larger brain.

c. The terminating extremities of the bronchial tubes and portions of the pleural tract.

The remaining portion of the stomach, and the whole of the secondary digestive tract, and part of the small intestine tract.

The remaining portion of the larger brain tract; and

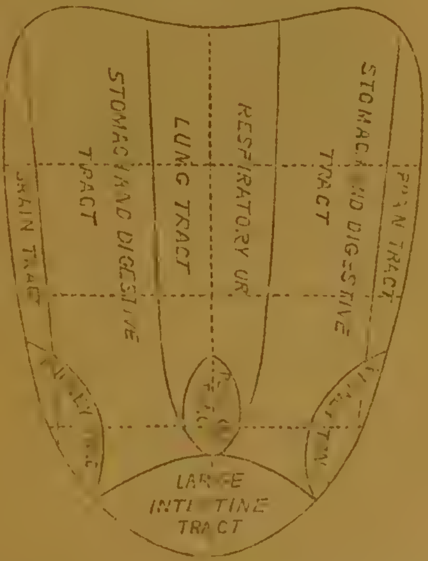
Part of the kidney tracts.

d. The remainder of the pleural; the small intestines and kidney tracts; and lastly,

The whole of the large intestine tract.

These are the divisions of the tongue, with the names of the tracts for more easy reference.

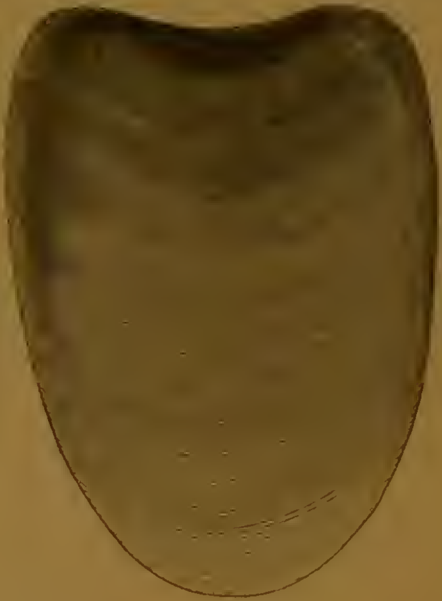
Fig. 2.



The next points to be considered are the laws of the Fouling and Cleaning of the tongue, the importance of which cannot be overrated.

Of the FOULING OR FURRING, or first indications of the commencement and progress of disease.—This is shown by the fur gradually coming down from the back part, and spreading from edge to edge towards the tip, in an ELLIPTICAL form.

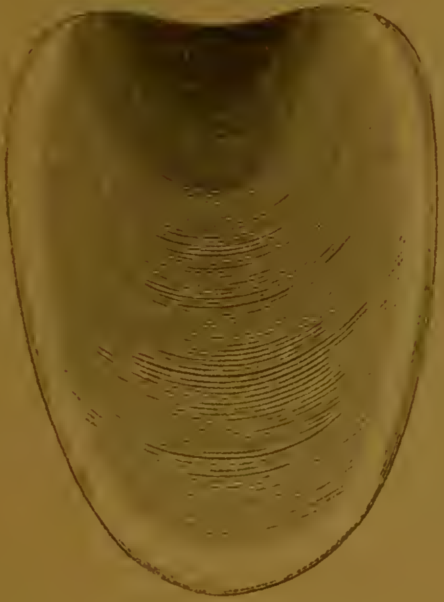
Fig. 3.



As all the first actions of disease are of an acid or congestive character, it is seen that the parts first affected are the instinctive or more animal and sensual, such as those relating to eating and drinking, with the involuntary acts of respiration. Then follow the stomach, bronchial tubes, and portions of the reflective brain, with all their various derangements. These present by far the most numerous cases for treatment, but, as I have previously said, the easiest to be got at. It then follows that the deeper-seated portions of the lungs can only be affected by the previous neglect in removing the first causes of their becoming diseased. The same also with the kidneys; for if it be borne in mind that these organs are only intended to remove acid elements in excess of what the system requires, with the help of the skin, it becomes plainly demonstrable that if they are compelled to exceed their natural actions, they become first mechanically overtaxed, and then morbidly affected, when the brain becomes implicated. Lastly, the large intestines become affected along with the reflective portions of the brain; consequently these parts are not so much at fault as is so universally imagined.

Secondly, the CLEANING of the tongue.—As disease declines, the fur gradually leaves the tip and edges, and recedes in the form of a CONE towards the back part.

Fig. 4.



Thus the progression of disease, and the organs gradually implicated, are shown by the fouling of the tongue; while the cleaning of that organ, indicating a return to health, reverses this arrangement, and shows that the large intestines and the brain are the first parts restored to a healthy condition. Thus demonstrating the great wisdom of Providence, that that part of the body which provides the vitalizing gases is the last part affected by disease and the first to become relieved; and that portion of the brain which is the seat of reason and thought shall also be the last part of it to become implicated in morbid or diseased action, and the first to recover for the especial integrity of the mind. So going backwards we come to those parts which are more under our control if properly and wisely treated. It may therefore be inferred that no organ presents so correct a means of diagnosis or discovery of disease as the tongue. I challenge physiologists to deny the facts I have pointed out respecting the advance, progress, and retrogression of disease. No books on medicine or physiology, or anything ever taught in the schools, have ever noticed or pointed out these great laws. Nor could physiologists have ever come at any correct conclusions, even if they had discovered them, except by the aid which the tongue affords in proving these great and indelible truths.

Having described the laws of the progress and retrogression of disease, and the organs affected and restored in their due course, I have to mention another discovery, not so varied as the tongue in its indications, but of the greatest importance in confirming the location of disease in any district of the body, and that is of Headaches, which I claim equally with the novelties of glossological laws.

The Head and its Divisions.—Headaches, as means of diagnosis, are more important than they have hitherto been considered, and help to localize the seat of disease in various organs of the body, by a law of sympathy affecting given parts. I allude only to that class of headaches which happen within, and which are distinctly located in the Back Part, the Sides, the Front, the Temples, and the Top or Vertex. Thus if my readers have carefully noticed the progress which disease takes as shown by the laws of fouling and cleaning of the tongue, the following tabular arrangement of the head will be clearly defined in apportioning the

Back Part to	The digestive stomach and the sensual and instinctive organs.
The Sides ,,	The chemical or second digestive parts, together with the small intestines or appropriating parts of the alimentary canal.

THE FRONT	to	The large intestines or seats of the greatest manufactory of the vital gases.
THE TEMPLES	,,	The reflective or reasoning brain itself and its membranes.

THE TOP, or VERTEX, has reference only to the uterine functional disturbances in the female.

Thus by the aid of the tongue and the head the means of diagnosis may become very perfect, but not, however, to the exclusion of all others.

The appearances of the tongue are of the greatest importance, for this reason,—that whatever disease exists in the system, they mark the distinctive condition of the secretions, and by these the laws which regulate health and disease are judged. The normal or healthy appearance of the tongue should neither be contracted nor flabby; but feel comfortable in the mouth, and of a pale rose-colour, owing to the little dots or pile on which the fur grows being of a whitish colour situate on a red ground. From this standard the white dots elongate, and the tongue becomes furred and coated of all colours, moist as well as dry. On the other hand, it may become perfectly denuded of all fur or coating, and present a red, crimson, or scarlet appearance, glary or glazed, dry or moist.

The first appearance of its coating or furring indicates an additional acid tendency to what the system requires, consequently the first step in disease, and this may go on to the highest extent in which the system can exist in such extra-acid condition. This is often beautifully illustrated just before scarlet-fever breaks out; when the whole mass of thick coating will vanish in a few hours, and leave the tongue like a piece of scarlet cloth. If this then occurs as a whole, it occurs also in parts. Thus it will be seen that the stomach tract may be white and furred, and the lung tract red all down, just as if it had been denuded by art; but no art can do this. If the white or furred appearance denotes a congestive or acid condition of the system, so the red appearance denotes an inflamed or alkaline one; and this in all the localities specified as representing the several organs or parts of the body. Thus, if any one has a cough, and the lung tract shows a furred state all down it, the disease is a

BRONCHIAL CONGESTION, or acid condition. If on the other hand it is red, there is BRONCHITIS, or an inflammatory or alkaline state; and so with all other parts.

All these indicate certain stages of disease of the mucous membranes. Disease of the serous membranes are seldom accompanied by tongues denuded of fur; but the very reverse, the fur being inordinately thick. When it is so, and also moist, these membranes are in a highly congestive or acid stage; but if the fur becomes brown, dry, and rough, then they are in an inflammatory or alkaline condition. By these means certain facts are verified, that there does exist acid or congestive rheumatism, or cholera, or fevers, &c., as distinct from their inflammatory or alkaline stages. To discriminate these is of the utmost importance, because their treatment is diametrically opposite.

Thus there are broad rules for diagnosis as well as minute ones. Disease comes before the scientific investigator in such questionable shapes, that it induces him to localize it and make it the specific end of his inquiries. Empiricism, or experience, points out certain means which appear most appropriate in the treatment; but as this is the act of every individual, and differs so much, it seems an utter impossibility to come to any fixed conclusions, or for any one man to master all the opinions that have been given by what are called the highest authorities. Every man, therefore, follows his own; hence the great discrepancy in all medical treatment. It does not follow that he who is best informed on all authorities theoretically is the best practical physician; the bedside destroys many illusions. The actual practice of medicine, or administration of remedies, may be compared to a rickety statue on a constantly patched-up pillar founded on a solid base. Thus, anatomy and physiology form the scientific base; pathology, chemistry, physical and vital laws, and many other studies in which science and art are combined, form the pillar which is always being patched and mended; while the statue thereon is only kept from falling by the most laborious and unremitting exertions of empiricism. Still, wherever truth has triumphed, it has been by the discovery of scientific and fixed laws, and these must eventually guide the practice of medicine and the treatment of disease, however far from truth they may be now.

The wonderful and beautiful laws I have here set forth, with their marvellous simplicity when once understood, will give a power and a degree of certainty over disease which has never yet been attained. Therefore, whatever disease the body labours under, the appearance of the tongue will be found the best indicator of the class of remedies to be administered, in which there can exist little error and no confusion. It will raise the profession out of the bog in which it is now floundering, and place it on a firm footing; and if it is not perfect, will lead to greater induction, by many minds bearing on it. It will make the profession itself more united in their treatment, and consequently more so amongst themselves. It will give the public more confidence because of this, and remove the opprobrium now existing of doctors' differences. It will cure by science and philosophy instead of empiricism, and will deal the deadliest blow to charlatanism. Still, with all this, the greatest difficulties these new but simple truths will have to contend against will be from the opposition of the profession itself, because of their prejudices, which are, and ever will be, obstructions to all advance, as they ever have been in every age.

CHAPTER VI.

FOOD AND PHYSIC.

Excess of acid, the first step in disease.—Measles and scarlet-fever.—Rapid tendency in nature to organize secretions.—Foul stomach during fasting removed by a meal.—Diet is medicine.—Errors committed by dietitians.—Every country supplies its distinctive food.—General adoption of roast, baked, and broiled meats in preference to boiled.—The Government dietaries false and pernicious.—Errors in dieting invalids.—Congestive and inflammatory actions.—The curative drugs are few and simple; their wrong application increases disease.—Disagreement of physicians.—Received opinions too much cherished by the faculty.—General ignorance of the public of their own bodies; their fears in making inquiry, and their confusion on the contrariety of opinion.—Science and charlatanism; the former must ultimately triumph.

I HAVE shown that HEALTH depends on certain general conditions, and that the first departure therefrom is regulated by progression in the excess of acid elements, and not by their sudden deficiency. This law affects the sensual, animal, or instinctive organs first, and the higher and reflective ones last. Also, that these latter are not so permanent, because they are dependent on the morbid condition of the primary ones, which come under the head of functional disturbances, and are congestive, and consequently acid actions. Whatever, therefore, may be the disturbances in the body, which are short of inflammatory actions, their treatment is simply by removal of obstructions, or by actual antagonism of the elements producing them. On the other hand, if this be not done, but through any neglect of the patient himself, or a wrong direction given by the misapplication of medicine, Nature takes the matter into her own hands, and removes them; but this she often does too rapidly; then inflammation of organs, with or without fever, ensues. So that it is impossible these actions can take place without a given number of the others having previously existed. The natural predominance of the acid constituents of the body being lost, the system takes on an inflammatory state, either wholly or in part. This must be repaired by adding or giving to it that in which it is deficient, or such remedies as will enable it to form them within itself, which are the acids and anodynes. The third action in the system by which Nature gets rid of congestive or acid actions is through the skin by eruptions; or through the mucous membranes by spontaneous vomitings and purging. Small-pox may illustrate this as a complete action, for it requires very little medicine, only cleanliness, and support according to the requirements of each case. In chicken-pock, natural powers only half do their work, for the congestive actions producing this are only half relieved, and further reduction by alkaline remedies may be necessary. By measles the system is relieved through the venous circulation in the lungs, when warmth and free exudation through the skin are called for; the least check often threatening life. Medical assistance is also necessary here, because the mucous membrane requires well cleaning and free purging after the excitement of the accompanying fever; otherwise eruptions of a squamous character ensue, especially about the nose and mouth, because some morbid poison remains in the blood of the veins. In the very opposite action to this, as in scarlet-fever, all congestive secretions are so rapidly consumed, that the force of the combustion destroys the epidermis or outer skin, which is seen to peel of; whilst the mucous membranes throughout the internal structures are first highly inflamed, and then undergo a similar process. If restoration of these is not complete, the ducts of glands and other vessels become blocked up, and we find mechanical obstructions, producing dropsies. Empiricism, without the least guide from the laws governing health and disease, but from the mere frequency of these two diseases, acts correctly. The one is treated by stimulating expectorants and alkalis, the other by direct acids and anodynes; general and local blood-letting is found admissible in measles, but not in scarlet-fever, except under very exceptionable circumstances.

After digestion is completed the stomach ceases to secrete acid; but a process of organization takes place, and the mucus itself becomes filmy; the salivary glands lose their stimulus, and their secretion becomes organized; hence a phlegmy condition, which some persons experience more than others. Thus the tongue becomes coated or foul before meals, and the breath a little tainted: a fact noticed by Shakespere in his play of 'The Two Gentlemen of Verona':—

> SPEED. Item, she is not to be kissed fasting, in respect of her breath.
> LAUNCE. Well that fault may be mended with a breakfast. Read on.

All other mucous membranes are similarly affected, and help to produce what is called the congestive state, which the tongue shows by its fouling or coating. The urine exhibits filmy traces from this condition, and when unable to clear itself, this organized condition produces stone and gravel. Now looking at these several conditions, what, let us ask, is the effect of a meal? Why, as a direct alkaline mass, it corrects this organic disposition of the mucous surfaces. Truly, then, every meal is both diet and medicine. Nothing shows the elastic state of the system so much as the cleaning of the tongue after a meal, if it has been at all foul before. It is this act that frequently takes away a nausea or a headache, the result of excess of acid in the system; and it is this constant action which keeps up a healthy condition.

Having stated the vast variety of elements within the body, the natural inference is that they must be renewed by an equal variety of nourishment. Being omnivorous feeders, we cannot possibly define what it is in the end that does us the most good, either as nourishment or medicine. We know that a certain class of food produces animalized constituents, which are the nitrogenized variety; that another class produces heat; and a third, the non-nitrogenous, which have the properties of stuffers, to keep the alimentary tract properly filled, especially the large intestines, and whilst doing so, generate the vitalizing gases. Again, the variety of food, considered as diet and medicine, may at times, from a peculiar condition of the elements within the system, act in the latter capacity, and produce vomiting or purging, to the great benefit of the system generally. Here then, without artificial assistance, disease becomes arrested, because the first elements that produce it have been removed.

It is a very pleasing study to know the elementary constituents of everything, and trace 'all flesh to grass,' to show the animals that feed on these vegetable substances, and man on them. There are, however, reasonable bounds put to our knowledge for our own good, which dietitians endeavour to transgress by eschewing the things that might do them good, and then flying to medicine which does them harm. Our philosophy should take the broadest gauge in the matter of diet. Every country furnishes something distinctive, and its denizens take that which is the most fitting for them in the climate in which they live. The old axiom, 'When at Rome do as the Romans,' should be followed. If it be seen that in hot countries the use of alcohol or spirit is abjured, and vegetable predominates over the animal or flesh diet, there is some good reason for it. So with the blubber and fat consumed mostly by the Greenlanders and Esquimaux. With respect to ourselves our habits are varied; yet with all this there lurks a deep philosophy in all we do, if we only search after it. Why is it that throughout the kingdom a preference exists for roast, broiled, or baked, over boiled meats? that out of the whole three hundred and sixty-five days, probably not thirty days can be reckoned for boiled-meat dinners by the most ardent lovers of this fare? No one knows why they do this or why it is best for them, beyond the fact that they prefer it. When the arbitrary acts of routine in the army, navy, or large establishments compel a deviation from this, the result is disease and death in a larger proportion in these communities than in the others who can act from choice. It is little short of slow poisoning and manslaughter, and as much indictable in these days as any other act of poisoning. As a fact then, after their digestion, roast, baked, and broiled meats leave behind them the least quantity of acid elements in the system; as well as when first taken, act best, and are best acted on, by the acids which are present. On the other hand, although boiled meats are alkaline to the system when first taken, they do not absorb so much of the acid constituents present in the body after fasting as do the roast, baked, or broiled; consequently, not only by not doing this, but in the last act of digestion, they leave behind them more free acids. Nature of course tries to counteract this in every possible way, though she cannot always succeed. Thus we see that usage has made her own philosophy without knowing it. To condemn boiled meats entirely is perfectly absurd, because this comes under the head of the variety which I am advocating, and which again usage follows; but even the poorest, as a law of diet, who have to provide for themselves, do not take these habitually. Folly such as this is only left to Governments, who take the best lives from the whole country, and convert them into the worst by unwise procedure, and, what is more, permit the mercantile marine to do the same.

The mortality of the Guards, dieted as they used to be, and the present state of the commissariat in the navy and the garrisons generally, present such opposition to the science and philosophy of the age, that only Governments can practise who have no individuality to be punished or consciences to be condemned. Boiled meats and broths have not been properly considered in their bearing in disease. After scarlet-fever, or in all cases of inflammatory action on mucous membranes and inflammatory fevers, when the tongue is perfectly clean and red, they are of the utmost value, because they produce acid actions, in which the system is deficient; whilst in all congestive or super-acid conditions, when the tongue is coated or foul, the roast or broiled meat should alone be given. So much has diet, thus considered, to do with convalescence or recovery from congestive disease, that I have seen the medical skill of the physician knocked down by errors of this kind, and life lost by a relapse attributable alone to a basin of mutton broth. Therefore it is necessary to understand the broad principles of diet as much as the broad principles of medicine.

Whatever the disease may be, we have only to understand the general condition of the system, for it is through this that cure must be effected. There is not a part of the body that is not subject to disease, and this must be considered in two distinct lights—the congestive, and the inflammatory. All our errors arise in these not being properly distinguished, consequently medicine and diet are indiscriminately given—a right medicine and a wrong diet, or a right diet and a wrong medicine, or both wrong or both right by a matter of accident; no philosophy being used in one more than in the other. Almost all our ailments, for want of the understanding of very simple laws, are made complex and difficult. Simple deposits in organs from an acid excess of the secretions produce congestive diseases; these being suddenly reduced, produce in these very organs an inflammatory or alkaline condition. Herein lies the great difficulty of detection. Pain is not always indicative of inflammation, nor the absence of pain of its not being present. Inflammation of the mucous lining of the alimentary canal is seldom accompanied by pain. Its not being present often tends to the denial of inflammation being there: whilst flatulence, or pent-up wind distending the calibre of the tube in any given part, will often cause so great pain as to lead to the supposition that there is inflammation when none actually exists. The treatment is then regulated merely by supposition.

Whatever the disease, the universal cry is, 'Attend to the secretions and look to the excretions.' This is all very well: but under present circumstances there is no guide how to do this with any certainty. The worst form of medicine and diet may be given in a case, and yet the patient may recover: this can be no apology for its being right in the end, seeing that it might have acted in an opposite way, as it often does. Elementary matter might be so disturbed by this proceeding as to do good by accident; but no one in the present state of the art can say with certainty what medicine will or will not do, therefore medicine is given only with hope and the best intentions. There are, as I have already shown, congestive and inflammatory fevers, congestive and inflammatory rheumatism, congestive and inflammatory choleras, congestive and inflammatory consumption, and states of the lungs from the highest to the lowest condition of these actions. So also these states may exist in the more simple forms of disease, especially in those parts that I have described as being the most often and permanently affected; the least error in treatment increasing them. It is more satisfactory to science to know where disease is chiefly located, what organ or organs are most affected; but they can only be got at through the system generally, and to cure one, all must more or less be made to bear their part. As no organ can take on an inflammatory condition until almost every other in the body has become highly congested, so this one removes the onus from all the rest; for Nature, as I have before said, uses her own peculiar process in removing congestive or acid elements, leaving one organ as a scapegoat.

As we have seen then that diet has its medical as well as nourishing duties, and may be divided into acid, alkaline, and neutral properties, so it is with medicine. Our really curative drugs are few in number compared to the great variety used, though this is always correcting itself. Every year the industry of man brings us some fresh nostrum, which has its little day of fashion and then subsides; precisely as our cooks bring us every year some fresh dish, or culinary compound, only to have its day of fashion. This is all very well for the palate; but the few stern realities of undisguised bread, mutton, beef, lamb, veal, pork, game, poultry, fish, and vegetables still take their prominent part. It is only in the way they are cooked, and taken in cases of disease or health, that they do good or harm. In health they make flesh and heat, or bulk of materials within us, and form or convert them into other elements. So with medicine; we get plenty of new compounds which are to do everything; but we still keep to our soda, magnesia, potass, and other alkalis, and the various infusions of bark or alkaloids; also to the direct acids—nitric, muriatic, sulphuric, &c., all serve us well as direct and curative agents; whilst opium, anodynes, quinine, æthers, tinctures, powders, and extracts assist, and only those who read the book of nature rightly, and by simple laws, know the value of simple corrective elements. If we were to reconstruct the practice of medicine from what we give to cure diseases, we should soon arrive at some stern philosophy of it. Thus, as I have distinctly shown, life is a great chemical battle of opposite elements aided by the vital forces, heat, electricity, &c., which produce a given result by laws which we have learnt to imitate in our laboratories. The new elements of our nourishment act, as they are required in the system, as fresh troops to continue the fight. So, therefore, medicine properly directed should only keep up the balance for the healthful warfare to continue, throwing its opposing powers to overcome the stronger, thereby neutralizing them and assisting the weak, whose destruction would soon end in the loss of life. The great congestive or acid actions neutralized by the alkalis, and the inflammatory or alkaline actions assisted by the acids and opiates, whilst the weaker forces are brought round by the stimulants. If these facts were so reasoned on, and applied philosophically, there would be found a greater certainty in medicine. It is perfect heresy now to say that alkalis are given to neutralize acidities, or that acids are given to add to tho system elements of which it is deficient; seeing that the former are given in inflammatory actions and fevers to the destruction of life, and acids in congestive actions to add to disease. It is lamentable to see disease fully detected and apparent, and then made worse, and life lost, for the want of proper rules for the administration of drugs. If medicine acted always in the patient's body precisely as it is arranged it should in the prescribing physician's mind, why disease would soon be banished from the face of the earth: but it does not; the result is, the augmentation of suffering. There is no rule so certain, and no guide so true as the tongue in at least seventy-five per cent. of all the cases that come before the whole profession. Twenty-five per cent. of cases may offer themselves in so anomalous a shape, that discrimination seems impossible; but by far the greater number of these can be rendered more certain by its indications. Therefore, as all drugs may be divided into actual acids, alkalis, and neutral preparations which are non-chemical or mechanical, all diet may be divided by a similar law into that which *corrects* acid, that which *encourages* and *makes* acid, and that which is neutral or mechanical. These being given accordingly to oppose excess of acid in the system, or supply that which is deficient, or add to the mechanical actions, it seems but a simple philosophy (let the disease be what it may) to judge the system in the same way; namely, that it must present itself in one of three distinct characters,—an acid, an alkaline, or a neutral condition. Therefore, to correct excesses, or add to deficiencies, as the case may be, seems only the following out of just principles. This, however, is a simplicity too degrading to the intelligence and too lowering to the great mind of the age, notwithstanding all nature is governed by it. It would seem that there is as great a reverence in medicine for its superstitions and its practices on faith and belief, as there is on any other idolatrous superstitions and practices wherever found. Unfortunately, the public have hitherto refused all knowledge of their own bodies; for two reasons,—first, that every impediment has been thrown in their way of obtaining any satisfactory knowledge of themselves; and, secondly, of its being imparted to them in such questionable shapes, in all the perplexities of scientific jargon and obscure technicalities, that it frightens them to know too much. Inquiry has therefore been limited, and not even the most learned or well informed out of the profession take any interest in the matter; and if they do, they become so confused by the contrariety of opinions or advice, wherein there seems no certainty, that they yield themselves up to the profession to be slaughtered secundum artem. Bewildered by the fears and the whims of an ignorant public, the profession is tossed about by its own adverse principles on the one hand and its interests on the other. Some parties they have to do with will have plenty of physic, and think themselves hardly done by if they do not get it. Others exclaim against physic, but will have their physician daily, and expect him to cure by some principle of hygiene without physic; whilst the charlatans, seeing their game clearly before them, take one or other of the principles used in general practice, and ride it as a hobby. At one time it is counter-irritation; at another the profuse swallowing of no end of pills; at another hydropathy; at another homœopathy.

With respect to homœopathists, they are to-day patients; to-morrow, converts; and the third day, full-blown professors, carrying their globules in their pockets, administering them to everybody, knowing every disease under the sun, and professing to cure them besides. Never was such a glorious truth found out as this has accidentally discovered, namely, how little real disease there must be if so little cures it.

It is only upon very extended, very general, and very broad principles, that we can judge on what *health* depends, or what errors in the general economy produce *disease.* We cannot do more with medicine, nor can medicine be said to act in any way more than by general results. A key to its administration seems to be the desideratum of the age; discrimination under certain well-ascertained and broad rules being all that is necessary. Those laws which I have laid down to regulate all these proceedings will not be found far from the truth. The public require to be better informed; and if they find they can get more out of science than charlatanism, I have no hesitation in saying they will prefer it, and that science must ultimately win, and leave smaller openings for nefarious vocations.

CHAPTER VII.

MEDICAL AND SELF TORTURE.

This is done with equal certainty as success.—Civilized men no better than savages.—Self-medication often aggravates disease, as well as the misapplication of external remedies.—The oven-and-brandy principle.—Hot stimulating linseed-meal poultices most pernicious, and increase the area of inflammation and self-torture.—Cold concentrates the area of inflammation.—Hot and cold remedies adversely applied.—Cold necessary in all self-generated heats or inflammation, and heat to all sudden blows, bruises, &c.—The reverse is now generally done.—Bathing, healthful to some, injurious to others.—The idle and slothful class.—Errors in medicine and external applications equally committed by professional and non-professional persons.

There is little doubt that self-torture is practised under certain delusions to a very great extent. If I did not constantly see prejudice overriding all truth, and usage all philosophy, I would not have written this book. So much evil is added to natural affliction by the means used to remedy it, that it often strikes me mankind seem not to be satisfied with moderate suffering, so are led by inconceivably cunning devices to augment it, and this is done with equal certainty as success. A satisfaction also appears to accompany this, because a prejudice is flattered and a usage obeyed. Why, then, should I interfere, if the world is so pleased with its ignorance? It is as likely to condemn me, as to receive my advice kindly. Why should I stand between a man and his own self-torture, who is constantly doing such things to himself which no philosophy can warrant, or common sense justify? As civilized, is he better than the savages who cut their flesh voluntarily in the performance of certain ceremonies pleasing to their great Mumbo-Jumbo? Yet these are called ignorant, and as being devoid of reason. Nevertheless, the civilized man does pretty much the same things in another way; but with equally painful and often fatal results; and worse still,—why are these practices upheld and taught as principles by the 'medicine-men' who ought to know better? I will not offer crude advice, or say anything without giving a reason; I appeal to this, and let all persons judge for themselves. That medicines administered with the best intention and according to all rules of art by the profession itself, as well as by all classes on their own responsibility, aggravate disease and suffering, is too clear to need any illustration. If in this uncertainty human flesh and blood has to endure so much, how much more so must it suffer in actual torture, when the improper use of external applications aggravates every form of pain? As in medicine, so in external remedies, there must be a philosophy of right and wrong. The use of hot or cold applications most marvellously misapplied have caused, and do now cause, and will continue to cause disease, and suffering, and death to a great extent, unless the public eschew their errors and prejudices. If common sense will not serve those who profess the surgical art, how is it likely that it will the unlearned? Take for instance a fever, a general heat of the whole body; what would be said of a man who advised the getting into an OVEN, AND DRINKING BRANDY to relieve it? Perhaps I may be called what he would be for the bare mention of the folly of such a proposition. But stop! Take natural inflammation of some local part; the heat, the redness, the swelling, the pain; in fact a fever of that part, and then say where is the sense of putting on a HOT STIMULATING LINSEED-MEAL

POULTICE. This is putting the part into an OVEN with a vengeance, extending thereby the area of the inflammation, and increasing disease in extent, in depth, and in the pain. Yet this is done indiscriminately by the profession if called in, and by the public generally, as an article of faith and usage; it is, in fact, one of their deepest-rooted prejudices. Now let us philosophize on this. Some natural arrest of the circulation of the blood; some deposit of a congestive character in the veins, or engorged condition of the blood in the arteries; obstruction in the capillary vessels, or functional disturbance in the numerous small glands near the surface, produce a heat or fever in a given locality, precisely as these very same facts occur in the internal structures, and produce the various diseases we have to contend against. There is however this difference—the external obstruction has a tendency to form matter by the destruction of the part so implicated. This fact being of such frequent occurrence, usage and custom apply the 'OVEN and BRANDY,' or rather the *hot linseed-meal poultice*, in order to bring it to a head. Now wherever this is so applied,—to a whitlow, or threatened loss of a nail, to a boil, to swellings of any kind, particularly of glands, to punctures from blunt instruments, or from thorns producing festers, or to unhealthy cuts where the bottom of the wound has not healed, but the skin grown over, shutting in the morbid matter; whatever in fact produces this local fever, the hot poultices are applied, and the area of inflammation is extended,—a large abscess is the consequence, at least many times the size it would have been. While to the fingers and toes, which are frequently the seat of spontaneous festers, &c., irritation is kept up, the skin is thickened, and rendered less liable to be permeated by matter; the heat is driven down the soft structures to the very bones and joints, and a portion of them may be lost in consequence. Independently of this the inflammation is driven up the arm or leg, a red line is seen marking its course, and if not abscesses, at least intense glandular swellings take place under the arms or in the groins. The system becomes upset and the whole body ill, and no one knows the end of it. The amount of suffering, and not only this, but the foundation of disease thus voluntarily inflicted on the system, has often led to an early death. Thus a wretched and false practice, based on usage and prejudice, inflicts an infinite amount of self-torture. Can the commonest of common sense at all justify this most unphilosophical proceeding on the 'OVEN-AND-BRANDY' principle? I have probably to answer the question; what are we to do then? Why! apply cold, cold, cold, nothing but cold; plain cold water. 'But that won't draw.' Certainly not; you don't want to draw, but to prevent extension of inflammation above, and below, and around; and if matter will form, it does so in the smallest possible compass, and concentrates quicker. Instead of a fortnight, a month, six weeks, or even longer suffering, as is often the case, there will only be a few days. If the skin is tough, relieve it by a slight puncture and let the matter out; but keep on with the cold. When matter runs freely, and the part is seen to have nearly completed suppuration, THEN, and not till THEN, put on a warm poultice of bread and water; for this reason,—that a little additional warmth thus applied promotes the flow of pus and *stimulates* the growth of new flesh to restore the injured parts, and in twenty-four or forty-eight hours no more poultices will be required. Whitlows are a little tedious, because not only a new nail, but an entirely new nucleus for that nail has to be formed; and until this is done the burning heat and redness will continue, which should be kept under control by cold; afterwards the inflammation will cease, unless kept up by the 'OVEN-AND-BRANDY' or HOT POULTICES. All spontaneous swellings therefore of any kind, attended with inflammation, heat, swelling, redness, tenderness, &c., having a tendency to suppuration, or the formation of matter, should be treated by COLD APPLICATIONS, the very reverse of what is now done. This is the self-torture that I see continually practised by everybody. Some forms of erysipelas require sometimes cold, sometimes warm applications. The redness and pains of rheumatism and gout are also excepted from the above advice, because neither are of a suppurative tendency.

Now for the opposite form of self-torture in a smaller way; which is in the application of cold as an article of faith. When any person receives a fall, a blow, a bruise or contusion from any cause whatever, let us see how usage and prejudice conduct the public, claiming as it does to itself so much wisdom; why, it either commences rubbing with liniments or applies cold; so that, not satisfied with the pains of the fall or blow, it must aggravate its tortures by rubbing, and prolong its disfigurements by all the colours of the rainbow. We must again apply argument and philosophy in this matter. If, as in the previous case of natural pain producing redness, which develops the mass of blood-vessels in a much enlarged and diseased condition, and cold is applied to decrease them; surely, on the other hand, if the parts are perfectly healthy up to the very moment they have received a blow which has injured the calibre of the vessels and produced a sudden arrest of the circulation of the blood within them, or paralyzed their action, it is most unwise to apply cold to keep them so; yet this is actually done. Now, as soon as possible after such accident has happened, apply *warmth*, even as hot as it can be borne, to carry on the circulation, and by this means prevent congestion or stagnation of the blood. Any sudden sprain of the foot or ankle, wrist, shoulder, or any other joint, in all these cases, as well as heavy falls, the application of heat, if possible, and well kept up, is the best proceeding. But now a bruise is rubbed, or vinegar and brown paper applied, or a piece of cold meat to the face if the blow is there, or a cold knife, thus arresting the circulation of the blood in vessels already paralyzed. Thus the public, by a perversity difficult to be accounted for, and without a grain of common sense, do the very opposite they ought to do. They apply cold where they should apply heat, and heat where they should apply cold. By doing this to very severe recent sprains, they lay themselves up for months. In rubbing with liniments they often produce abscesses, or tendencies thereto. In all cases where this incomprehensible folly has been perpetrated, they suffer for many months, when they need not have suffered more than weeks, or even days. Thus it is my painful duty to witness a number of my fellow-creatures, martyrs to prejudice, moonying and crawling upon the face of the earth, unfitted for the duties of life, a burden to themselves and others; curable, yet uncured, from the mal-administration of medicine on the one hand, and the misapplication of external remedies on the other, exercising neither reason nor philosophy in anything. As if we had not sufficient ailments from natural causes, but that those we have must necessarily be aggravated by every species of remedy the very opposite of what should be done.

Other modes of self-torture exist in persons doing to their own injury that which others can do with impunity, or even benefit. This is done largely in bathing and slopping. The Brownes go to the seaside and appear almost amphibious; they delight in bathing; it invigorates and does them good. The Caggs do the same as the Brownes, yet get ill and generate a host of occult disorders, and wonder that the seaside has not done them so much good as the Brownes. This is one of the errors of hygiene. Other poor mortals also, as much to be pitied as any I know, are those of the idle and slothful class, born with what is called the silver spoon in their mouths, who eat and drink and live in Fancy's sickly school, useless to themselves, and answering no purpose in the great end of human life; who would be happy and well if they followed the old axiom of living upon half a crown a day, but first being compelled to earn it. These self-torturers I have no pity for, yet still none deserve more; they are equally abusers of themselves as the drunkard or the sot, the vicious, the dissipated, and the immoral. The one rusts, and the other wears out an otherwise robust frame. There are many other forms of self-torture, which, as I have broached the subject, will strike the thoughtful, only, I hope, to be remedied. It must not however be supposed that the errors of medicine or outward application are confined to the self-administration of them; they are shared in by the profession generally to an almost equal extent, and there is as great a revolution required in their proceedings as in those who are non-professional.

CHAPTER VIII.

ARRANGEMENT OF DISEASES BY THEIR REMEDIES.

All diseases can be thus arranged.—The improved habits and modes of living rather than medicine have improved the health of the people.—Government inquiry into the epidemic cholera of 1854.—Epidemics not better treated by medicine now than formerly.—The Hospital for Consumptive Diseases.—Confusion of disease.—Remedies misapplied destroy health, but not life.—Mercurials condemned.—The present despotism of medicine demands a revolution.—Opposite remedies cannot cure the same disease, or the same medicine opposite diseases.—Systems, not individuals, to be blamed.—Science advances through knowledge of its defects.—Truths, rather than men, to be held in honour.—Harvey's, Jenner's, Hunter's, Galileo's, Newton's, &c. &c.

All diseases can be arranged by a very simple process of division into classes. The want of this causes failure in their cure, or aggravation of their powers. If I were asked, what has been the cause of the greater health of the community now in comparison with former times, I would answer, the more rational mode of living, and the general altered habits of mankind in civilized communities; their more rational tastes, occupations, and amusements; the greater development of the mind in healthful pursuits, and general hygienic rules of air, water, ventilation, draining, and all its accessories. These take by far the highest place, while the practice and administration of medicine takes the very lowest. If it were possible to place the world a half-century back with all the diseases and epidemics and endemics of those days, medicine, as now practised, would be just as powerless as then. Nothing shows this clearer than in the government inquiry into the epidemic cholera of 1854. The united opinion of the whole body of the profession exhibited their medical incapacity in the treatment of that malady, and would again if it returned; or even the treatment by physic of any other epidemic, because medical treatment is founded on the quicksands of opinion only. The institution of hygienic rules of prevention of disease is not the giving of drugs for such disease when it is present. The two are perfectly distinct: granted, there is less to do, because hygiene has made the cases milder; the merest tyro in medicine can judge of this. But take those cases where hygiene has not stepped in; see how powerless the actual administration of physic is. In former days, epidemics presented some general condition; now they present many exceptions, yet death ensues in the same proportion. Up to the point of administration of medicine, the attendant arts and sciences have improved, have made rapid, nay, wonderful advances. The physiology, the chemistry, the diagnosis of disease are brought to the highest condition, but there it stops: stops at that very point on which the public are alone interested, and that which is of the highest importance, namely, the curing by medicine,—fails. Fails because we have no rules, and many which we call so are false. There is not a hospital where physicians and surgeons do not teach a practice of medicine differently to others; and all in every hospital teach it differently to their colleagues. The empiricism and opinion of each being alone the guide, and neither the public, nor those who are taught, are able to judge of this, but must take their dicta as conclusive. Let us ask what the Hospital for Consumption has done for that disease. It has done what I have said, up to the point of administering medicine, and though many new things have been given and tried, the disease remains, like cholera or fever, an opprobrium to the medical art. It is said that fevers are better treated now, simply because less is done for them. So by leaving Nature to burn out her own fuel, credit is taken as if the administration of medicine had cured. There is as great a revolution required in the arrangement of disease as in the administration of physic. Take for instance, the diseases of the various organs. Here we see congestive and inflammatory action, the one being affections of the venous system, the other of the arterial, and this throughout the whole body. Take affections of the lungs. There is bronchial congestion and bronchitis, two most opposite diseases, requiring the most opposite treatment by medicine, diet, and hygiene. So also congestive and inflammatory consumption; congestive and inflammatory cholera; congestive and inflammatory fever; congestive and inflammatory rheumatism; congestive and inflammatory apoplexy; congestive and inflammatory conditions of mucous and serous membranes of brain and nerve matter, as well as of glandular affections. By far the greater number of diseases of the digestive apparatus are congestive alone; whilst those organs which are designed to carry the causes of these more frequent ailments away, such as the mucous membranes, the skin and kidneys, partake more largely of the congestive than the inflammatory actions. Disease presents itself mostly to our notice in one or other of these distinctive forms, on the discrimination and the treatment of which depend all our remedies, and these are equally simple and distinct in their arrangements, and so is the diet which should accompany them. But now they are all so huddled and confused, and so undiscriminated, that it seems almost a miracle that any one gets better who is obliged to submit to physic. Yet, strange to say, and I have seen it so repeatedly, kind Nature, who always strives for life and health, will resist both physic and disease, and by some anomalous proceeding in the ten thousand chemical laboratories of the body, will uphold life; a diametrically wrong proceeding having destroyed health. So indistinct is the reasoning on the action of medicine, that when a patient recovers to a certain extent under such conditions, the case is recorded as being cured by them, when no such thing could possibly be the case. Some alteration in the distribution of matter, or excitement of a diseased action elsewhere, relieving that which appeared most prominent, may happen. This is often exemplified in the administration of the mercurials, exciting great glandular and mucous action, and so relieving deeper-seated inflammatory ones in serous membranes. But is it known that the action of these horrid chemicals produce low chronic inflammation in the glands and mucous structures, and make a different disease, and so plant the germ that shall destroy the system in another form? At another time, the administration of medicine having reached a certain point, some wise discrimination takes place between patient and doctor; the one getting tired of giving physic, which has availed but little, and the other of taking it; the patient leaves it off and gradually gets better; though often the worse from the remedies than from the original disease. I know of no despotism that has been controlled by revolutions, if a revolution is not required in such states as these. If the profession were to re-arrange its mode of evidence of the action of medicines, and classify all the diseases that are cured or benefited by alkaline remedies from those which are relieved by acid ones, they would soon arrive at very important conclusions. They would learn the simple rule that alkalis neutralize acidities, and acids add to the system elements required for its general economy when deficient thereof. That stimulating expectorants, such as antimony or ipecacuanha, relieve the mucous membranes of congestive or acid actions, and that the skin sympathizes with these, and by their united action causo a gentle perspiration. That in no case (except these congestive actions are present) is purging beneficial as a means of relief. If these are truths, and inflammations and inflammatory fevers be tho very opposites of congestive actions, then it is apparent to the most unintelligent that the very opposite remedies must be those best adapted for them ; and such are the facts.

It is impossible, nay, out of all reason, to supposo that opposito remedies will cure the same disease, or a distinctivo chemical medicine can cure opposite diseases. No authority of names can make such practice correct ; yet it is constantly attempted in the wards of every hospital, and in private practice, as evidenced in the published accounts of cases in the public journals of medicine, which I could cite by the score, therefore it is no fiction. For example, a patient is brought into a hospital with an inflammatory disease ; A, the house-physician, prescribes acid and anodynes upon a principle, to the evident relief of the sufferer. B, the physician of the ward, comes the next day, and guided simply by his own opinion, orders the very reverse, on which A thinks him wrong. C, a third physician, is asked to see the case, and he prescribes something else ; and therefore D, a fourth, is called upon to give his opinion, and he differs from all three ; mind, simply in the administration of medicine, the fact of tho diseaso being admitted by all. *The patient dies.* A, then justly says, that if his treatment had been followed the patient would have lived. All this is not far off an actual fact. Now what can bo said of the practice of medicine when four physicians are thus teaching it differently in one singlo hospital ?

Yet no blame can be attached to any one, because tho philosophy of the administration of medicine is not yet based on the condition of the system generally. There are occult conditions of the system which will ever be subject to empirical treatment; but broad principles of treatment will make these fewer than they are at present when better understood. Hence the world will always recognize the scientific and educated practitioner as a most valuable member of the community. Science does not advance by concealing its knowledge, or by a complacent satisfaction at its attainments. It advances only through the knowledge of its defects, and boldly admitting and confronting them. This is the phase, this the revolution medicine has to pass through, and the sooner it is commenced the better, and let no name be honoured by a surreptitious fame. Whatever bears the impress of undoubted, inalienable truth, let that alone be honoured. Could anatomists or physiologists have upset the truth of the circulation of the blood, Harvey would not now be immortalized. If vaccination had been proved a myth, Jenner would not be honoured. If the labours of Hunter had not been proved of vital importance to the study of physiology, he would not be had in our remembrance. If the laws which Galileo and Newton defined were not fundamental truths, we should not now pay reverence to their names; and so with hundreds who exist only by their allegiance to truths. But, recollect, all these men were silent revolutionists, democrats of science, demolishers of received opinions, opponents of authority and popular belief.

CHAPTER IX.

ACID OR CONGESTIVE DISEASES.—THE SAME ACCOMPANIED BY ALKALINE OR INFLAMMATORY ACTIONS.

THE STOMACH.—ENLARGED TONSILS; SORE THROATS; ULCERATED THROATS; QUINSY; DIPHTHERIA.—BRONCHIAL CONGESTION.—WHOOPING-COUGH AND CROUP.—TRACHEAL, OR THROAT-COUGH; STOMACH-COUGH; AND CLERICAL SORE-THROAT.—HEADACHES; DIZZINESS; VERTIGO; ASTHMA; INDIGESTION; HEARTBURN; HICCOUGHS; FLATULENCE; CONSTIPATION; SOME HEART COMPLAINTS; PALPITATIONS.—GRAVEL, AND STONE.—COLICS, ETC.

Acid or congestive states show themselves in different parts in different persons.—Explanation of the terms congestion, engorgement, injection or infiltration.—Congestion of stomach universally called "Bilious."—Treatment by medicine and hygiene, &c.—Pernicious use of the mercurials, especially by parents.—Enlarged tonsils; sore throats; ulcerated throats; quinsies; diphtheria; their gradations and appearances shown on the tongue; treatment by medicine, hygiene, &c.—Bronchial congestions—Treatment by medicine, hygiene, &c.—Whooping-cough and croup.—Tracheal, or throat-cough; Stomach-cough and clerical sore-throat: observations thereon; also on many disorders having their origin from the same train of causes, their name being LEGION.—Many forms of nervousness brought on by false systems of medication.

ALL diseases depend on certain general conditions of the system; the organ or organs attacked being simply the more peccant ones in the individual. In one person the same morbid conditions will show their effects in the throat and its adjacent glands; in another, in the lungs; in a third, in the stomach, and so on, the distinctive ailments being in the mucous membranes of those parts; while in others the effects may become deeper seated or more advanced, and the serous membranes be most diseased. The treatment I propose for these will be in accordance with all those medical and hygienic principles I have laid down; the former will be expressed in numbers or references to the prescriptions to be found elsewhere, while the hygienic principles, such as diet, air, &c., will accompany the notice of the different diseases.

The first act of disease follows the natural order in first attacking the animal and instinctive parts, as shown in the posterior parts of the tongue, in the transverse division A and B, fig. 1. It is however of importance to understand certain terms, and to adhere to them as indicating distinctive actions.

Congestion—Engorgement—Infiltration, or injection of the blood in the vessels, are, commonly speaking, called inflammation. Now there are no expressions more vague in medical art than these, and this arises from the want of definition or complete understanding of medical nomenclature.

I have defined them thus:—CONGESTION is a morbid collection of the grosser elements of the blood in the VEINS; ENGORGEMENT is the same thing occurring in the ARTERIES; INFILTRATION or INJECTION is a similar fact occurring in the CAPILLARIES, when they carry red instead of white blood; this latter being shown by a blood-shot eye. These actions will be found to bear on the theories of disease and its treatment, and will some day solve the problem philosophically, of depleting or starving in contradistinction to the stimulating principles, which occasion much medical discussion and dissension; but which is the old Brunonian system of empiricism fresh ventilated.

Congestion of Stomach.—This gives the first indication of a departure from health by acidities, eructations, nauseas and what is called heartburn, and the very numerous affections produced by foul stomach, shown by the fetid breath, headache at back part, and general uneasiness. These several conditions lead persons to declare themselves as 'not being quite the thing;' 'not first rate;' &c., but most frequently and popularly as being 'bilious,' which is the most monstrous and fallacious of all doctrines, leading to the falsest of all conclusions, as well as to much medical torture. If I can only direct the popular mind away from these most pernicious ideas, and gradually conduct it into proper channels by a greater simplicity and understanding of natural laws of common ailments, the mission of one man will be the means of preventing untold misery and suffering. To stomach congestion, without any specific disease of the system, may be traced a legion of complaints. The tongue is furred, coated, or loaded, both in the stomach and lung tracts, sometimes more in the former—and sometimes in the latter. The throat is phlegmy, and cough is often present, which may be as much from the stomach irritation acting by sympathy on the top of the gullet, as from the lungs by sympathy on the top of the windpipe. The system feels stuffed, blown out, flatulent, oppressed, and loaded; these are the first effects seen in infant life: Nature comes to their assistance by a spontaneous vomit, when they become suddenly quite well. The same occurs in adult or after life, relief being equally apparent by a spontaneous or an artificial vomit. At other times no medicine is taken at all, the system recovering itself by the mere alkaline action of fresh diet, or the acids finding an outlet by a spontaneous excess of action on the bowels.

Treatment by Medicines.—The alkaline remedies Nos. 45 to 48 are called for for infants: Nos. 1 to 7 for adults. Thus neutralizing the acids and producing a neutral salt in the system, which often acts as a purge. If emetics are required, Nos. 8 or 9. These remedies should be taken sufficiently long to relieve the stomach and reduce the system to a natural balance.

TREATMENT BY HYGIENE, &c.—Children after being weaned should have but little meat or milk in their usual diet. Roast, baked, or broiled meats, according to the rules of diet in congestive disease for adults. Exercise, especially in the open air, the free oxygen of which is the best of physic: all other hygienic rules should be attended to.

N. B. By these proceedings the primary causes of diseases are neutralized, and are assisted by, and have due effect on the second or chemical stomach. The bile if too acrid is reduced, and whether the liver be SLUGGISH or over-active, that organ is left to perform its duty as Nature intended it should. But if the stomach is ignored and the liver alone deemed the cause of the evil, and the person is considered BILIOUS, mercurials, salines, and black-draughts are resorted to; the first acts equally on all glands as well as the liver, while the two others help the purging process. Thus glandular organs are unnecessarily stimulated, and vital elements carried out of the system. Instead of simple correction to stop disease, it is aggravated. This being repeated frequently at each so-called BILIOUS attack, disease is engendered which would never have occurred naturally. Parents who are constantly administering calomel to their children, not only destroy their health, but lay the seeds of disease and death in their systems, which literally becomes a species of infanticide. At the commencement of treating congestive disorders, I have felt it necessary to speak of popular errors and delusions, as it will be seen that the principles I would substitute are those of corrective and alterative actions, which do no violence to the system, but act with, rather than against, Nature's own principles in combating disease.

ENLARGED TONSILS; SORE THROATS; ULCERATED THROATS; QUINSIES; DIPHTHERIA.—These are stages of the development of the same train of causes which always commence in a loaded or congestive state of stomach, which has its progressive stages, and as it would seem, the throat is the relieving organ in every such condition. Thus, when an acid condition reaches a given stage, Nature relieves a congestive state about the throat by an inflammatory action. The tongue shows this in a marked and unequivocal manner. It is white and coated in sore-throat; more so, in ulcerated throats; and still more so in quinsy, when it is positively loaded to the fullest extent. It is not so coated in diphtheria, because the inflammation has concentrated disease and relieved congested action; the same also in enlarged tonsils. In no disorders is the system so completely ill at ease as in all these maladies; headache at the back part, with general lassitude, and a complete prostration of the animal and instinctive powers being present.

Sore Throats are flashes of inflammation on the posterior or movable palate, uvula, and surfaces of the tonsil glands: Ulcerated Throat is one step further, the inflammation having affected the structure by eating into it. Enlarged Tonsils are originally blocked-up glands, from the mucous membranes being congested and then taking an inflammatory or engorged arterial type. Quinsies are abscesses in the neighbouring structures of and in the soft palate, waiting only to burst the outer membrane and discharge their pus or matter. Diphtheria is an aggravation of all. Thus step by step we see that highly acid conditions of the stomach are the chief causes of these various diseases. But diphtheria involves all the parts about the throat so extensively, that I have no hesitation in saying no children under fourteen years of age can get over it, because they cannot be made to take the medicine, or submit to the application of caustic in the free manner it should be used. Besides this, there is so great a constitutional disturbance present, that the sufferers are knocked down at once, and have not the nervous energy to rally.

Treatment by Medicine.—The alkalines, Nos. 3 and 4; with acid gargles (No. 27) for sore or ulcerated throats. If gargles cannot be used for these or enlarged tonsils, a large soft camel-hair brush dipped into it should be substituted, and the throat mopped very frequently with No. 28, because it is sharper and more astringent. As the tongue in enlarged tonsils is frequently not much furred, an acid mixture (No. 31) such as is used in bronchitis may be taken; the throat being first well gargled with it before swallowing.

Quinsies should be somewhat differently treated, and the throat gargled with water as hot as it can be borne; as these are diseases of progress, inasmuch as they are suppurative. A quinsy once set in, must have time to suppurate like all other abscesses. The alkaline mixture No. 2 should be persisted in as long as swallowing can be tolerated, in order to remove the acid secretions of the stomach. Directly the abscess breaks there is an end to the disease; the tongue gets clean immediately. Should the throat, however, not heal readily, but show an inflammatory or ulcerative condition, the acid gargle No. 27 should be used. In full habits, emetics (Nos. 8 and 9) are very beneficial in quinsies. The treatment in all these cases depends on the appearances of the tongue, as indicating the general condition of the bodily secretions; if furred like that in quinsy, emetics and alkalines as prescribed, with the free application of caustic to the tonsils, or nitric acid gargles (No. 28), with the brush. If the tongue be not so furred, the acid mixtures Nos. 31 and 32, swallowed slowly, to act as gargles as well as medicine, are beneficial. If the tongue is clean and red, denoting much inflammation of the whole lining membranes of the canal, then the acid mixtures Nos. 22 and 23 should be used. This state will be seen in the diphtheria of adults, when the same acid should be used, with free application of lunar caustic to the sloughing ulcers in the throat. It is the due discrimination of the congestive or inflammatory state of the system that can alone direct the proper treatment. If Nature wills a contrariety of action, or produces similar effects by opposite conditions, science must bring a contrariety of remedies to meet them. The weapons must, however, be distinctly defined and correct, or simple ailments will be aggravated by a wrong treatment.

Hygiene, &c.—As air is always necessary and important in congested actions, it must be repugnant to all inflammatory ones; it should therefore be avoided in sore and ulcerated and inflamed throats, and enlarged tonsils. After reducing the inflammatory actions, then air is necessary; also moderately good living in the use of all the roast, broiled, or baked meats. Act in these things wisely, for while it is necessary to alter, remove, and to correct morbid actions, it is also incumbent to restore power by good raw material. It is a golden maxim never to starve a congested mucous membrane, for in doing so the candle is lighted at both ends. On the other hand, active inflammatory actions must be starved to a certain extent. In quinsy, while the abscess is forming, cold linen cloths may be put round the neck, and renewed as often as they become warm or dry: they hasten the suppurative process, by causing concentration; whilst warm water, used as a gargle or drink, hastens the rupture of the abscess.

The next parts affected are those which are instinctively connected with them—namely, the lungs; and we shall see how simply Nature acts by consecutive law.

Bronchial Congestion.—This is known by a cough, from a loaded state of tho mucous membrane in the bronchial tubes, attended with a frothy mucous expectoration, and always accompanied by a similar state of the stomach. The tongue is furred and coated down the lung and stomach tracts: if the stomach is most affected, there will be headache at the back part; but if the lungs, then this is absent; for it is a singular thing that headaches do not generally accompany distinct lung disorders, though violent coughing will shake the whole system, and especially the head. Pure bronchial congestion may extend from the windpipo to the terminal extremities of the bronchial tubes; it may also bo confined to the larger tubes, where the windpipe first divides into two, and may only go a small way into the lungs, or it may penetrato to the centres; but when it extends to their extremities, it is then much aggravated. These distinct stages can be traced on the lung tract of the tongue. All the upper works, throat, &c., are implicated

Treatment by Medicines.—The alkalis and stimulating expectorants; for the stomach must be as much thought of as the lungs: thus Nos. 1 to 7 for the former, Nos. 10 and 11 for the latter; and these should be persisted in until the stomach and lung tracts are cleaner. The great object is to remove phlegm from the windpipe and lungs; therefore free expectoration should be encouraged. Blisters and mustard poultices may be used in all these actions as counter-irritants.

Hygiene, &c.—The same as for congested stomach; fresh cooked meats, roast, baked, or broiled. Support the system by good and nourishing things, while removing the causes of disease; never starve under these conditions: free exercise and air are necessary, because the oxygen is as good as physic; and good diet and exercise promote perspiration and free secretion of the urine. In all these cases the system should be kept well roused; and as in direct stomach congestion, I see no reason to leave off the usual drinks of a stimulating character, such as mild beer, &c. Tea and coffee, not too strong, and with little milk or sugar, may be freely taken.

Whooping-Cough and Croup.—These are diseases of the upper breathing tubes, the throat, and windpipe. The former from organized mucus so fixing itself to the membrane from which it had its origin, that it cannot get away; or from a morbid condition of the old membrane in course of decomposition and transformation, not detaching itself perfectly from the new, which is always forming as the old structure wears off.

These conditions produce the most distressing coughs, which become spasmodic from nervous irritation. The fore part of the tongue for two thirds of its length (fig. 1, B C), or that part called the gustatory, or tasting portion, is generally clean; whilst the posterior third (fig. 1, A B), or motor portion, forming a wedge shape, is always more or less furred: this characterises the whooping-cough tongue. Croup seems to be a similar condition confined more to the vocal chords. All children do not have whooping-cough; it seems to me to be chiefly confined to the grosser class, or those that have an excess of the vital actions, and who, instead of being lightly dieted, are over-fed.

Treatment by Medicines.—Emetics are here very useful, even when given on an empty stomach or fasting, as their effects last longer. The vegetable emetics, Nos. 8 and 9, may be given when the tongue is much coated at the back part, and the child gross. The mineral emetics, Nos. 75 and 76, when there is want of power, or the child weakly; the alkaline medicines are also necessary (Nos. 45 and 46). Croup, being more a spasmodic action, is often relieved by emetics, followed by an active dose of five to ten grains of compound jalap powder in a table-spoonful of water.

Hygiene, &c.—The attention to proper ventilation and air is requisite. In gross subjects free oxygen is beneficial, with exercise, and good perspirations encouraged; in weak subjects, neither of these can be tolerated so freely. Warm and demulsive drinks; but little milk, or anything that is likely to produce acid actions.

TRACHEAL, OR THROAT-COUGH; STOMACH-COUGH; AND CLERICAL SORE-THROAT.—These very frequently occur, and are so often confounded with bronchial ailments, that a few words are necessary to set them in a right light. The throat-cough is clearly distinguishable by the fur on the tongue occupying the thicker portion of the posterior third, in the space A B, fig. 1, precisely as it is seen in whooping-cough and croup. The immense amount of expectoration in this cough cannot be a matter of wonder. If any one fond of what is called the root of an ordinary ox-tongue, will cut through the fawn-coloured salivary gland on each side. and notice its size, and calculate what must be the amount of ordinary secretion therein; then take into consideration his own proportional large glands similarly situated, he will cease to wonder that if these glands are in a morbid condition, they cause not only excessive irritation about all the surrounding parts, but yield an immense amount of thick mucus which should be freely expectorated. The change of temperature from a warm room to a cold external atmosphere will often cause less inconvenience than coming from the latter into the former; in doing which loss of voice may ensue, and often happens more frequently on first waking in the morning than after being about in the air all day. I had abundant opportunity of seeing this during the late severe frost; also the effect of the thaw, and of the milder atmosphere, converting these affections, by the consecutive law of disease, into the inflammatory stages of ulcerated throats and quinsies. A tracheal, or throat-cough, and a stomach-cough are frequently mixed and dependent on the same train of causes; therefore all the rules laid down for the congestive or acid actions should be here followed. The acids of the stomach should be corrected by Nos. 1 to 7, and the congestive glands above spoken of stimulated by cough mixtures (Nos. 10 and 11); fresh air and good living being also necessary. If these are considered bronchial actions, then they are not only unduly magnified, but misplaced.

I have had occasion to remark in my large work on HEALTH AND DISEASE, that the atmosphere of many churches is the most pernicious that can be breathed; hence those clergymen who have to do two or three duties in them, only one day in the week, may readily come at the cause of what they suffer, namely, *clerical sore-throat.* On the discrimination of these depends their cure; the tongue being the best guide to the state and condition of the stomach and tracheal ailments, and pointing out the best remedies for them.

HEADACHES at the back part or sides, or a general sensation of fullness, DIZZINESS, VERTIGO, ASTHMA, INDIGESTION, HEARTBURN, HICCOUGHS, FLATULENCE, CONSTIPATION, SOME HEART COMPLAINTS, PALPITATIONS, GRAVEL, STONE, COLICS.—All these come under the head of congestive actions, the tongue being the best guide to ascertain their causes; for if it be furred, coated, loaded and moist, be assured the alkaline remedies are best suited for them. So many of these complaints have hitherto been classed under the general term of BILIOUS, that the very worst evils have followed from the liver being blamed, and recourse had to the mercurials and aperients. A blue pill at night and a black draught in the morning (a combined medicine strong enough for a Shetland pony) damaging the system, while the evils complained of are not removed; no wonder, for all the causes have been passed over, and medicines given to act at the wrong end first. Not that a mild aperient may not be useful sometimes; but if the tongue be furred, it is always best to begin by neutralizing the acid state of the upper works, and after that to take some slight aperient if necessary. The phlegmy state in catarrh, colds, indigestion, heartburn, hiccoughs, flatulence, &c., should be first corrected in this way without the necessity of starving or low diet. Recollect, that while correcting the minor defects of the BRITISH CONSTITUTION, its *Institutions* should always be upheld. This is as good a bodily as a political axiom. Never starve JOHN BULL in his own person or his constitution. Effects are often shown in the large intestines when the causes are far above them. The simple act of constipation requires more thought for its causes than the conclusions jumped at in the giving of aperients.

Never forget that the vital gases are generated in those bowels which all lovers of aperients most mercilessly purge away. Persons who are supposed to suffer from what are called heart-diseases, I have often found to have nothing the matter with the heart at all: they want simply the stomach and upper works attended to.

Gravel and Stone arise from an excess of acid in the system; and full doses of soda when the tongue is furred or loaded will often dissolve the base of these concretions (Nos. 3 and 4).

Colics generally arise from flatulence distending the calibre of the gut, or from emptiness of the large intestine; and many of these most serious disorders originate from the natural two-thirds stuffing being constantly removed. In *painters' colic*, the transverse arch of the large gut is almost always deranged; its calibre being distended and contracted, alternately; the contents, hardened sometimes like a stone, have a difficulty to pass the contracted parts, hence the intense pain: castor oil is one of the most valuable remedies for this state.

Many women suffer with large pendulous abdomens, from the habitual use of aperients; these medicines having emptied the tube of solid matter, leave yet enough fæcal deposit to generate a vast amount of gas, which distends its calibre. The consequence of this is, that no solid or consistent fæces can aggregate; all the neighbouring parts become enlarged; a fatty disease ensues; the abdominal walls become pendulous, and in such states, large livers, dropsies, tumours, and other evils are suggested to be present during life; but after death their livers are discovered to be small, with some inches of fat in the abdominal walls, and quantities of fluid between them and the intestines, and these latter are found to be distended with wind enough to fill a balloon. Persons of sedentary habits who eat little, such as dressmakers and sempstresses, suffer from costiveness, which is in fact their salvation. Nature here retaining the scanty fæces in the colon to generate vital gases: but this is quite sufficient to provoke the usual work of purging, or the use of clysters. These cases should first be treated by good fresh air and diet, and then the bowels will act for themselves.

Persons who suffer from Asthma often live long; some say asthmatic people live for ever, implying that this disease does not necessarily shorten life. Those who have asthma should never attempt to stop the impending cough. The accumulation of mucus is often enormous in the morning after sleep; time having been allowed for it to generate and accumulate. Directly the cough comes on, the sufferer should jump out of bed, and get his cough well over, and his phlegm well up. A teaspoonful or more of gin, or of chloric æther, is a good thing to take. Alcohol has a specific action on the state of the bronchial tubes in this complaint.

Here, then, are a host of disorders dignified as specific affections, yet occurring from one general train of causes, which the appearances of the tongue and the head symptoms will indicate truthfully, as well as point out the proper remedies to be used.

It is impossible to enumerate the many ailments which have their origin from an acid or congestive state of the primary parts of the digestive and breathing organs;—their name is legion. As *chymification* is the first process of digestion, and *chyme* the result, if people were once to call themselves CHYMOUS, instead of BILIOUS, they would be nearer the truth. It is this gross and popular error that leads to the greatest mischief in medication.

Whatever ailment affects the body, if the tongue be coated, loaded, or otherwise foul or furred, it denotes excess of acid in the system over the natural predominance; a dose or two of alkaline medicine (Nos. 1 to 7) after meals or at bed-time is beneficial, and often prevents diseases of a graver character coming on by simple reduction.

Nervousness in many of its painful forms is the prolific offspring of those most detestable parents,—biliousness and liver complaints, and the vicious systems of the mercurial and aperient forms of medication.

CHAPTER X.

BRONCHIAL INFLAMMATION, OR BRONCHITIS.—PLEURISY.—CONGESTIVE AND INFLAMMATORY CONSUMPTION.

Bronchitis the opposite to bronchial congestion—Difference of expectoration in them—Treatment, &c.—Pleurisy: producing causes — Treatment, &c.—Congestive consumption: hard drinkers, and those who take mercury habitually, produce it in their offspring.—Hereditary bronchial congestion often mistaken for consumption.—Perspirations attendant on all lung affections.—The mercurials transfer disease to other parts of the body, but do not remove it therefrom.—Incipient consumption curable.—Confirmed consumption incurable—Not contagious—Treatment, &c.—Active physical exercise necessary.—Inflammatory consumption.—Indications of the tongue.—Tenacity of life in organic disease.—Treatment, &c.

Bronchitis is the opposite state to bronchial congestion. Both are attended with cough; that of the latter is rattling, with an abundance of frothy expectoration, whilst that of bronchitis is hard and ringing, and several efforts or attacks are made to dislodge the tough viscid mucus. At the termination of a bronchial congestion, the cough and expectoration frequently resemble those of bronchitis. The tongue in this latter disease is clean, bare, and red down the lung tract, whilst the stomach and other tracts are more or less slightly furred. Sympathetic pains are present about the breast-bone and between the shoulders, arising from the effect of coughing and the inordinate action of the muscles at the upper part of the trunk.

Treatment by Medicines.—The alkalis Nos. 1 to 7 when the stomach tract is *furred*. An acid cough mixture (No. 31) for the inflammatory action of the bronchial tubes. This should be persisted in as long as the lung tract shows any distinct redness; should the stomach tract not be furred, then the acid mixture alone should be given.

Hygiene, &c.—Beef tea or mutton broth. This disease requires a low diet; tapioca, arrowroot, sago in puddings, &c. Air is injurious, because the mucous membranes being inflamed, have little or no protecting covering; it consequently causes irritation.

N. B. Bronchitis is originally induced by Nature herself removing too quickly the congestive secretions of the lungs. The opposite state of the stomach to that of the lungs necessitates the two distinct treatments. The practised eye can detect upon the tongue how far the congestive or inflammatory state extends into the lungs, by noticing the fur in one case, and the denuded state of the tract in the other. By means of the transverse divisions, the tongue in all coughs is the best guide; for as they are caused by either of the above specific actions in the throat, the windpipe, the bronchial division, in the centres and in the terminal extremities, so the different parts of the lung tract will be seen to present a more or less furred or denuded state. An acid state of stomach will keep up inflammatory action of the lungs unless it be attended to. An early bronchitis thus treated will yield very readily; and in twenty-four to forty-eight hours the tongue will present a regular appearance as to colour, with no red mark down it, showing that the inflammation is gone. Counter-irritants, such as mustard plasters and blisters, are more required in the congestive than in the inflammatory actions of the lungs.

PLEURISY.—In addition to the engorged arterial state producing this disease, it is also caused by a congestive state of the mucous membranes of the lungs. The bronchial tubes terminate in very minute tortuous folds, in order to retain air: these become loaded, and the air, imprisoned and unable to make its way out, is forced through the covering of the lung or pleura, and directly this happens, inflammation of that serous membrane takes place. Sometimes the covering of the lungs, and sometimes the inner lining of the ribs, will be most affected; but often both at the same time. The lung tract will present at one time a furred or congested state; but as bronchitis frequently accompanies pleurisy, then this tract will become red. In the former case the small oval or pleural tract will be very distinct, and in the latter of a darker red than the tract in bronchitis. Acute pain, most frequently in the left side, will be present, accompanied by shortness of breath and a difficulty in coughing. The expectoration will be according to the character and condition of the bronchial tubes, whether congested or inflamed.

TREATMENT BY MEDICINE.—The alkalis or acids, as laid down for bronchial congestion and bronchitis, according to the appearance of the tongue, which, if white and furred, Nos. 1 to 7. If the tongue becomes dry, brown, or brownish red, then the acid and anodyne treatment (Nos. 31 to 34) to subdue the inflammation. Directly this is done, and the pleural tract indicates no red appearance, the state of the stomach and lung tracts should be carefully observed. If they are furred, the alkalis are needed in order to relieve the primary causes of disease; if the lung tract be red, then give the acids, &c. The application of a few leeches may or may not be necessary. No medicine can act in a direct manner on any given part, but only on the general mass of the circulation, and so influence all the secretions; therefore it must be changed according to the actual states so clearly pointed out by the tongue.

Hygiene, &c.—To be regulated according to the rules laid down for bronchial congestion and bronchitis, according to circumstances.

N.B. No class of persons are more subject to pleurisies than female servants. Their duties subjecting them to alternate heats and chills; and by their exposing themselves to draughts, many of these girls have habitual chronic pleurisies, and are never free from pain in the side.

Congestive Consumption.

This disease spares no station of life, high or low, rich or poor, sex or age, and occurs in all latitudes: the inhabitants of the colder regions of the globe, however, suffer less than others. A scrofulous disposition in the system, or where the glands are most subject to irritation, induces it to the greatest extent; and as this state is hereditary, so hereditary causes supply the greatest number of cases, and those mostly amongst young persons. As excess of acid produces in the system an excess of irritating agents, and enlarged glands are the result, so everything that induces this adds to the evil. The children of hard drinkers are often the subjects of consumption, whilst their parents live in an apparently sound condition: they receive the first elements of disease, and transmit them to the next generation. The offspring also of those who are, or have been, habitual takers of the mercurials are equally sufferers; and I can hardly define the difference between the debauched, who are always stimulating their vile secretions, and inducing too glandular an activity, from those who do the same by mercurials. Insurance offices ask two important questions of all applicants for life insurance; "whether they are temperate or otherwise?" and, "if any of their family have had consumption?" Were they to put the third question, "have you or your parents ever been salivated, or addicted to the use of mercurials?" they would do themselves and the public a great service; for depend on it, the congestive consumptions occurring after thirty-five years of age have their greater origin from both these classes. While, therefore, hereditary consumption produces the more numerous young cases, the mercurialists and hard-drinkers produce these later in life. No people take so much mercury and calomel as the English; none yield statistically a greater amount of congestive consumption. Poverty, which means not only want of the necessaries of life, but the presence of everything that induces disease, breeds consumption largely. The poor are not worse off in England than in other countries; they are probably better cared for, therefore they do not supply the greater average of this disease as against the poor of other countries; neither do the effects of various trades on the artisan more than in other countries. In these, as well as in our own, intemperance in the lower classes is a great cause; but if we equalize all these, still England produces the greatest average of consumptive cases. Cases that would rapidly go into consumption from the result of the primary causes of disease which I have abundantly spoken of, are prevented by neutralizing morbid elements, and giving them free air and ventilation, and using the hygienic remedies fitted to such conditions.

There is nothing that causes so great a disposition to consumption as the congestive tendency in glands. Many families have a thick phlegmy tendency; but so well bred are they, and so vulgar and horrid is it thought to expectorate, that it is checked in the younger members as indelicate. How often has this laid the foundation for consumption! Any other excrementitions act may be encouraged; but free expectoration must forsooth be checked. The disposition to this, like all other natural acts, is spontaneous; but the result is gulped and swallowed when it ought to be expelled. So great is this habit of false delicacy, that rather than expectorate, the risk is run of tracheal and bronchial congestions, gradually merging into consumption. At first the appetite is most capricious, and often absent, and long fasts or insufficient nourishment taken hasten the formation of mucus. I have pointed out the tendency to organization in all animal secretions, especially on mucous membranes. The more fasting is enjoined, the higher this state becomes; while on the other hand Nature may sometimes require a fast, and it does good under certain conditions, as she makes use of excess of elementary matter and removes it. Young persons having a phlegmy disposition should be made to masticate meat or crust, for the very object of inducing active actions on the glands about the mouth and throat, and to expectorate freely. Alas! it is too painfully done when they have consumption fully developed. If the act is admitted in this stage, when it cannot be checked, surely it is wiser to encourage it to prevent disease. There are many forms of bronchial congestion that go into congestive consumption, in a most unjustifiable and unwarrantable manner from these causes; whilst many purely bronchial congestions which I have attended, called consumption, and cured, I have had the credit given me of having cured consumption; but I repudiate all such honours as being opposed to truth. Congestion about the lungs will often cause the expectoration of blood, and frighten people out of all propriety, just because Nature has relieved the parts by the rupture of a congeries of small vessels. The errors I have seen in the treatment of these cases have been most grave, all from want of knowledge of the tongue's indices. Acids being used in these stages, have often made things worse. If the tongue is furred and coated, alkalis and the stimulating expectorants remove the cause of this. It is seldom that pain occurs in either congestion or inflammation of the mucous membranes of the lungs; nor is headache a symptom in these cases, whilst the mental vigour continues unimpaired to the last. Perspirations are natural to almost all lung disorders where the mucous membranes are affected. Pungent heat is present when the serous membranes are affected, such as in pleurisy in the external membranes, and pneumonia, or disease of the substance of the lungs themselves.

It is an error to suppose consumption is purely a lung disease: it has its origin in an universal want of power in the whole glandular system, visible in the general wasting and debilitated condition of the whole body, long before the lungs are attacked at all. This state may be cured and lung consumption prevented; if not, each day adds to the consuming actions of non-nutrition, and then the lungs become affected, so that these are the last, and not the first parts implicated; in fact this is the last act of the drama. When the lungs become affected, there is no hope of recovery, the mischief is too extensive, and too permanent throughout the whole body, and there are actually no powers to fall back upon to assist us in our endeavours to restore those which are for ever lost. Thus what is called the galloping consumption, will only last from seven to thirteen weeks from its first development in the lungs; whilst a slower form only lasts a few months. The great sympathetic action of organs is far from being understood; the sympathy of glands has a wonderful ramification, so has one class of membranes for another.

It is said consumption has no marked symptoms to herald its invasion: I deny this; it has a thousand if they were only heeded. There are persons who ascribe an illness to the last thing they ate having disagreed with them; so that the last ounce that broke the camel's back is deemed the cause, not the previous load. A cold caught at a party is often the last ounce of this load; but depend on it there is no fire without fuel. Let the heaping up of fuel be a little more considered and removed in time, and there will be less consumption, as well as of all other diseases. The expectoration from the lungs is often very deceiving, leading to the conclusion that it is from consumption, when it is no such thing. I have seen many errors of opinion in this, after families have been frightened out of their wits, and patients caged and imprisoned in their bedrooms when they ought to have been getting fresh air, which is better than half the physic. Sweating is not a true sign of the presence of consumption, for it often relieves, by removing the fuel to the surfaces, though it is one of the conditions of debility. Consumption is called a curable disease. I have seen many cases which have been called consumption that have been cured; but they were aggravated bronchial congestions, mistaken for consumption. Irritation and confinement of the bowels are equally accompaniments to congestive consumption, as to all other congestive disorders; sometimes a diarrhœa sets up for a day or two, followed by a few days' constipation. The tongue does not exhibit any marked appearances down the lung tract in congestive consumption: it is generally furred, and shows a universal congestive action; and when not so, is pale and flabby, and denotes a great want of power throughout the whole system. Consumption is not contagious as has been imagined; though mental influence and certain conditions of the body will have their effects on certain individuals; precisely as it has on all other diseases that people frighten themselves into. All diseases of a congestive character affecting the system may predispose towards consumption, therefore all these should be duly and properly attended to at first.

Treatment by Medicine.—Adopt all the rules of the treatment of stomach and bronchial congestion, by relieving the first disposition to disease. The alkalis and stimulating expectorants used in bronchial and other congestions of the glands of the throat are useful. The incipient stage may be cured, but when once true *phthisis* has set in, relief to suffering and smoothing the path to the grave is all that can be done. There is no form of medicine so valuable as opium (Nos. 77 and 78); it quiets the whole system. In the diarrhœa which accompanies this disease, it is most valuable; and it is equally important to know that the constipation should never be interfered with. If once medicine is given for this, a great error is committed; for alternate diarrhœa and costiveness are its peculiar tendencies; the former is alone to be checked. Cod-liver oil may add carbon to the system, may prolong life a few weeks or months, but will never cure. The great end and aim of medicine is first to check disease; and here it may check consumption in its incipient stages, combined with hygienic remedies, and in this light alone is the progress to this most fatal disorder arrested.

Hygiene, &c.—A routine has been followed of sending patients to the south of France, to Italy, to Malta, to Madeira, also to Torquay, and other mild parts of this island.

These places should abound in comfortable well-to-do undertakers, for they are the final resting-places of all that remains of the living masses sent to them. It is from the results of my own experience in all congestive diseases that free, fresh, sharp, bracing, and even cold dry air are true hygienic means of procedure, along with good, sound, nourishing diet. This is borne out by the fact that in the north there is less consumption than in the milder regions. I am firmly of opinion that in all cases of tendency to congestive consumption, where families can afford to send their younger scions away to any of the above-named old places, they can equally afford to send them to Sweden, Norway, or better still to Canada, or to some high and dry localities amongst the hills and elevated spots of England. Not, however, when there to lead idle and indolent lives, under diet, regimen, and physic; the girls to be dressed in fine silks, and allowed only to go out on seasonable occasions, and to lie in bed as long as their indolence chooses; but to be so clothed that they may go out in all weathers, breasting upland and lowland, riding or walking vigorously, and coming in only to take plain, wholesome, roast, baked, or broiled meats, and fresh cooked vegetables with plenty of salt, and then to go out again. The delicate susceptibility of fine acquaintances prevents them emptying their salivary glands of excess of mucus, when they should encourage this action to clear their throats, glands, and stomachs, and their bronchial tubes from viscid substances. These are the hygienic rules that reason and philosophy dictate; not the indulgence in soft air and pleasing association with all the culprits of fashion—Lydia-Languishing about in walks and parades to show their pale faces and marble-like skins. How many a beautiful girl, well made, and of good stock, might be saved by the healthy and invigorating process I have suggested; playing Diana Vernon, and scouring the country with a careful, buoyant, intelligent brother or male friend! Hundreds, nay thousands, might be thus saved to take the future matron's place, the mothers of healthy children, instead of laying their bones in untimely graves. No greater revolution is required in all the sickly diseases of our youthful Anglo-Saxon girls, in this their tendency to congestive consumption, than in the early treatment of every one of them. Better would it be to see health in kilts and gaiters, stout half-boots, wide-awake hats and cloth, than disease in silks and satins, lace and embroidery. Horse-riding, now so indulged in by ladies, is the first natural step towards this. Even this, however, would be better during the London season if twenty or thirty miles out and home were done in the country three days a week, and two perhaps for the parks. Why should the youth of the country alone take to the rifle and the drill? If we owe nothing else to our neighbours across the channel, we are indebted to them for rousing us from a latent to an active military nation, and for developing the physical power of our youth; if it answered no other purpose, it is one of the finest physical exercises ever adopted. Why should not the ladies handle the sporting gun? It gives an object to the long winters' days in the country; it induces a physical recreation, and amuses the mind, if only small game were followed. The carrying a light gun, and going over the uneven ground of fields and commons, would give muscular vigour and cheat disease (never mind the doctor) of half its victims. Do I say aught against the Graces and the Muses? far from it; they can be more successfully courted by the energetic and healthy than by the poor pain-in-the-side, gasping, listless, coughing, fragile pieces of porcelain-like human flesh and blood we see, and which we call the tender plants, who are not allowed to do too much, and so never accomplish anything. Depend on it, consumption is only to be cheated of its victims by attention and careful removal of all those early elements in the system which produce it.

INFLAMMATORY CONSUMPTION.

This disease is very opposite to the preceding one. As there are many symptoms in common with bronchial congestion and bronchitis, so there are many in common with the two distinct classes of consumption. I repeat, that Nature acts by gradation and consecutive laws in disease; and it may not be an unwise suggestion to say that congestive consumption is the next step in advance on bronchial congestion, and inflammatory consumption on bronchitis. I am justly led to this by all the characteristics produced on the tongue. I have spoken of its general furred or flabby condition in congestive consumption, showing that every organ in the body is more or less influenced by the disease. I will now show the opposite conditions as existing in inflammatory consumption, which may be called prolonged bronchitis, fixing itself deeper and deeper into the substances of the lungs. Here the lung tract is distinctly red throughout its whole length, and not like a sudden bronchitis, accompanied by a more or less congestive state of the stomach; but the stomach also becomes inflammatory, and its tract on the tongue is also red; so also will be the brain and large intestine tracts; in fact red all over. Even when this is the case, the lung tract is of a deeper colour, assuming often a purplish appearance. Cough is present; but the phlegm is thicker, and requires several efforts to detach it; perspiration is also here present. The only pains are in the side, and these arise more from a pleurisy that mostly accompanies these cases, and from the constant action of the muscles of the chest, than from inflammation of the mucous membrane. There is often a greater expression of anxiety in the countenance in this than in the other form of consumption. Tenacity of life is peculiar to organic disease; therefore in all these cases hope whispers life! life! which is so soon to end; while in high functional diseases that are curable, hope often fails, and the more people declare they must die, the more they do not.

Treatment by Medicine. All the acids, anodynes, and opiates (Nos. 22 to 25, 30 to 36, 77 and 78).

Hygiene, &c.—All the opposites to the congestive actions. Here a temperature of 60° should be the lowest breathed; here the warm climates of the south of France, Malta, Madeira, Torquay, and other mild and sheltered spots in our own island are necessary; here the comforts of home, too, in well-ventilated pure atmospheres are absolutely enjoined. The membranes, having no protecting coverings, cannot bear the least cold. How different is this to when they are clogged and loaded, when pure, fresh, cold, bracing air is needed! The diet should be boiled meat, mutton broth, milk, and everything that will make acid in the last act of digestion, to assist the acid medicines, in order to yield to the system that in which it is deficient. If these two diseases are so opposite, it requires no conjuror to see how distinctly opposite must be their treatment in medicine and hygiene. These facts cannot be too distinctly understood, nor can they be so without the perfect knowledge of the indices the tongue affords. That the two diseases and their treatment have not been hitherto defined is from this very cause; hence the confusion that has hitherto been made in all that relates to them; and the reason unexplained why the milder climates have sometimes done good, and at others had no avail, but rather the reverse. Simplicity and truth must be the guide in all things, and never was it more required than in readily distinguishing the difference between the congestive and inflammatory actions.

CHAPTER XI.

CONGESTIVE AND INFLAMMATORY RHEUMATISM.—GOUT AND RHEUMATIC-GOUT.—NEURALGIA AND TIC-DOLOUREUX.—APOPLEXY.—PARALYSIS.—CONGESTIVE AND INFLAMMATORY DIARRHŒA.—CHOLERA AND DYSENTERY.

Rheumatism attacks all parts of the body, internally and externally.—Lumbago.—Sciatica.—Treatment of in upper and lower extremities, by medicine and diet.—External applications.—General remarks on the two kinds, gout and rheumatic-gout.—Neuralgia and tic-doloureux.—Congestive apoplexy.—Convulsions or infant apoplexy, &c.—A well-regulated delay of consequence. — Usual unwise treatment now adopted. — Paralysis, different kinds—Treatment, &c.—Remarks on congestive actions generally.—Cholera—Diarrhœa and dysentery.—Congestive and inflammatory states to be discriminated.—The uselessness of the late government inquiry into the cholera of 1854.—Treatment of the two forms of cholera distinct and opposite.—Rules for any future inquiry.—Hygiene, diet, &c.—Slops injurious.—Pernicious effects of acting too soon on the bowels after they have been quieted from excessive actions.—The Government Medical Board; its cruel and pernicious orders.

Congestive Rheumatism.

One of the most common diseases attacking all parts of the body, especially the external members, though it has its choice of internal organs. It is indicated by a large white, flabby, and often furred tongue; every part and tract being implicated, showing clearly that it is not confined to one part alone, but to a general congestive condition of all the organs. It is peculiarly a capillary and venous disease, the elements in the blood in these vessels being chiefly at fault. Some persons have it most in the upper extremities, others in the lower, whilst a third class suffer from its effects in the more central parts of the body—the loins and hips, in the form of lumbago and sciatica. Wherever there is muscle there will rheumatism locate itself, or in its coverings. The worst and most painful is that which occurs in the coverings of bones, called periostial rheumatism; the favourite spots of which are in the shins and under the scalp. The diaphragm, or midriff, does not escape, nor does the heart. Rheumatism is Nature's effort to locate morbid humours in parts away from her organic structures, and the victims of this disease should appreciate this fact; when once she effects this purpose they become peccant parts. The least indigestion, cold, or any other simple causes, produce those well-known pains which the sufferers are doomed to grin and bear. Like all congestive actions, they are to be checked in their bud. The laws laid down for the advance and progress of disease will render great assistance in the treatment of this painful malady. When it occurs in the upper extremities, it should be somewhat differently treated than when it occurs in the lower. Rheumatism has a great disposition to angular jumping freaks, called by the learned metastasis. These cause great relief, for in their very skittishness a pain which had fixed itself in a locality almost long enough to be past endurance, will suddenly leave, giving a little interregnum to the sufferer, but with the certainty of his finding it come at another part. Thus it will go from the right shoulder to the left elbow; from thence to the right wrist, and from thence under the left shoulder-blade, or some opposite place never to be correctly calculated on. I knew an old stockbroker, a martyr to rheumatism, who would bet the odds on the next place his tormentor would go to; but he confessed he made very bad books, and would have lost in the long run; so erratic and uncertain are all these pains.

Treatment by Medicine.—Take all those medicines recommended in the early acid states of the stomach (Nos. 1 to 7). These medicines, especially No. 7, act chiefly on all rheumatisms of the upper extremities. Now those which occur in the lower extremities should be rather differently treated; therefore the medicines Nos. 16 and 17 are the best. Thus, on the one hand, by simply neutralizing acidities in the stomach, the upper extremities are relieved; but the lower are not relieved so much by these as by the alkaline aperients. If this treatment is reversed, simple as it is, the benefit will not be so great as by adopting the mode prescribed.

If the rheumatism should be of that character which has arisen from cold taken after mercurials, Nos. 79 and 80 will be found beneficial.

If liniments are used. the best I know is castor oil well rubbed in, especially to the joints. If the rheumatism amounts to the state called tic-doloureux, which is more along the serous coverings of nerves, then chloroform may be applied or rubbed in, especially about the face and head for facial and tooth rheumatism, which often comes without the teeth being decayed; but should it arise from decayed teeth, lose no time in having them extracted.

HYGIENE, DIET, &c.—Take all the roast, baked, and broiled meats, and all that class of diet which makes least acid in the course of digestion; light bitter beer is not objectionable. All spirits, wine, &c., should be avoided, as they add acids to the system. Where there is a tendency from long habit to rheumatism, the most careful dieting will not prevent it, and I am inclined to think that a rich rheumatism is better than a poor one; for by lowering the system by a too rigid and low diet, the pains are not only equally as bad, but from a low nervous power the system is less able to bear them. Better, then, to live well by sound nourishing diet, and reduce the excess of acids by the medicines prescribed: shampooing and the Turkish baths have been recommended. but there is nothing like the natural baths; not mere simple perspiration, but a profuse sweating, so that the bed-clothes may be almost wrung. This, however, must be done with discretion. It will not do to use the starving and sweating system at the same time, which is too Sangrado-like; but when a three or four days' sweating is to be adopted, feed and nourish well, so that while old morbid materials are being ejected from the body, healthy ones are put into it. I have seen rather awkward errors ensue from not adopting this course. As there are acute and chronic stages of congestive rheumatism, it will be found that warmth relieves the pains of the chronic, but aggravates those of the acute, especially when no perspiration ensues; therefore it is necessary to induce this to get any benefit. All persons suffering from or disposed to rheumatism should wear body waistcoats, whether flannel or merino, either all wool, or cotton and wool combined. Much depends on the character and nature of the skin of every individual. I have found that flannel or entirely wool waistcoats cannot be borne by all indiscriminately, and therefore recommend a cotton plush fabric, called swans-down, as equally warm, and not so irritating or hot as woollens. If persons are very susceptible of cold, a chamois or wash-leather waistcoat is a very nice thing. For sciatica and lumbago, hot salt, sand or bran bags are admirable applications, as they no doubt increase the calibre of the vessels by their heat, as well as liquefy the grosser elements of the blood which cannot pass through the minute vessels. This is attained also by the friction of liniments when used lustily, or by hot baths. Where patients have been perfectly immovable from acute congestive rheumatism, I have chased their erratic pains away by very hot linseed-meal poultices, till no part of the body had escaped; and where these pains have been so chased away, they have not returned to the parts where the poultices had been applied. A movable rheumatism is one that will move off entirely; but a fixed rheumatism will often defy all remedies. Therefore I advise that the most polite and delicate attention be paid to them on their first appearance, and to bow them out as quickly as possible. While saying what to do and what to take in congestive rheumatism, it may not be out of place to say what not to do. Persons of congestive or acid habits having a tendency to rheumatism should not take cheese or walnuts, chestnuts or milky kernels of this class; cream in tea is worse than liquid lard or butter, though it may be taken by them on fruit pies or puddings. Boiled meats once in a way; but never mutton broth. All boiled meats, milk, eggs, raw vegetables, salmon, brown outside of roast meats, port wine, and such things should be avoided.

INFLAMMATORY RHEUMATISM.

This is quite a different affair to the last, and no form of disease has been more mistaken. It is not so much a pure rheumatism as a class of pain so nearly resembling it that it has been ranked along with it, but which arises from other causes. It will come between the shoulders in *bronchitis*, and then the poor liver gets blamed; it will remain amongst the muscles of the chest after *pleurisies;* it will get into the joints after mucous membranous inflammations of the alimentary canal, either in the upper or lower ones, according to what part is or has been affected. Since my first discovery of Glossology, I have noticed it as an invariable accompaniment of *heart diseases.* It exhibits its sympathies by a tender scalp after inflammation of the coverings of the brain. It is an ignis-fatuus that often leads men astray who have not learned their physiology by the bedside; because it is so purely an effect of inflammatory actions of various organs by sympathy. No better guide can be had than the tongue; for this affection is never present without that organ exhibiting along some of its tracts a red appearance, denoting inflammatory action in such parts of the body as these indicate; therefore especial attention should be paid to this, as the two rheumatisms, the congestive and inflammatory, cannot be discriminated except by the tongue.

Treatment by Medicines.—The acids and anodynes when these pains are in the upper extremities (Nos. 81 and 82). When they are in the lower, Nos. 16 and 17. Thus direct aperients are only used in rheumatisms of both kinds in the lower extremities.

Hygiene, Diet, &c.—Warmth to the body, and an even temperature of the rooms: no exposure by denudation; no baths or rubbings; and no encouragement of perspiration, though it will come on naturally occasionally. Boiled meats, broths and milk are here better than roast meats: no alcoholic liquors of any kind should be taken.

General Remarks.—As much confusion in practice has occurred in the treatment of rheumatisms, a few simple rules will not be misplaced. Their character should be first considered, whether they are congestive or acid, inflammatory or alkaline; whether they attack the upper or lower extremities or the centre of the body; whether superficial, as on the skin; muscular, or deeper seated, or if they occur in the joints. Congestive rheumatisms of the upper extremities arise from the stomach, and require alkaline correctives and anodynes. If in the centres, it arises from the small intestines, when the alkalis may be given with slight aperients; if in the lower extremities, it arises from the large intestines, when alkaline aperients with anodynes alone are needed. The diet in such cases being that for all congestive or acid actions. If inflammatory or alkaline rheumatism occurs in the upper extremities, the acids and anodynes should be given; but when it occurs in the lower extremities, thus originating in the large intestines, acids, anodynes, and aperients are necessary. The pregnant cause of the non-success in treatment of rheumatism has been hitherto owing to the undefined conditions and causes of it generally, or want of knowledge of the specific actions of the various parts of the body.

Gout and Rheumatic Gout.

All that has been said of the congestive rheumatisms may be applied to gout. If the description of rheumatism be 'a wolf now gnaws me; now a serpent stings,' that for gout is 'to squeeze the part in a vice till you can bear it no longer, then give it one screw more.' By correcting the acid secretions and attending to the rules for rheumatism, and also to the positions after meals, and the use of high seats to aid and assist digestion, many attacks and much suffering may be avoided. Men have often pure gout; women seldom; they suffer more from a combination of the two, and have rheumatic-gout. They get the swelled joints in their fingers and toes, but not the chalk stones. There is a most important remark I have to make with respect to one of the most valuable remedies in rheumatism and gout, and that is the use of colchicum. When combined in the form I have prescribed it, whether with alkalis, acids, or aperients, it never accumulates or does injury, but quite the reverse; *when taken alone* it is most injurious, and I have never known a case where persons have been addicted to this that they have not died suddenly. Gout and rheumatic-gout should be treated according to the state of the system, as indicated by the tongue: if furred, then by the alkalis as recommended in common rheumatism; if clean and red, then according to the treatment of inflammatory rheumatism.

Neuralgia and Tic-Doloureux.

I have little doubt but that these painful disorders originate from the same causes as the rheumatisms, and that their seat is in the coverings of the nerves, which are highly vascular; indeed they are minute networks of blood-vessels protecting nerve matter within them, as small elastic cords of gutta-percha are protected by silk. This natural outside covering becomes the seat of capillary congestion, and presses on the nerve matter within. Better then that this disposition should affect larger tracts, than fix on the nerve coverings: for as in other parts, so it is in these, when they are once affected they become peccant, and morbid elements fly there. The subjects of these complaints are found amongst the slow blood-circulators and the inanimate, and those who neglect physical exercises, and thereby lose the benefit of good wholesome perspirations to purge their blood of morbid elements. If mild warm atmospheres, shampooing, and other remedies have benefited them, then it is evident that a free radiation from the centres to the surfaces are good remedies: ergo—they come under congestive actions, and require energetic exercises, and perspiration gained therefrom, as well as good generous diet to keep up the system. Art must, however, be called in, and iron and quinine and other uncertain remedies are tried. Simplicity is never adopted, or indeed found out, till the human mind has exhausted itself of all its wonderful and difficult problems which it never clearly understands; resting on its own suppositions which it firmly believes, and scarcely doubts, even when the illusion is torn away. A general treatment of the system for neuralgia, on the principles for congestive actions, will often remove its many forms. The tongue being the great guide to the forms of medicine used.

Congestive Apoplexy.

As we advance in the scale of the acid or congestive diseases, we find by the law of progression the parts wherein the higher vital powers are situate come at last to their turn of attack. That part where the reason holds its court over the acts and deeds of human nature is bountifully provided against trivial affections; yet often fails by reason of its own erring judgment to take cognizance of the causes that produce disease, or to stop the tide of its advance. Neither has it seen, or if seen, has it used proper precautions to stem the inevitable evil, but still continues gratifying its lusts and appetites; putting no stop to the morbid animal desires, not probably so much the immoral as the instinctive ones of appetite, and the desire for gustatory gratification. That part which I have distinctly shown as the last to be affected in disease is now attacked; not by any sudden, but by accumulation of causes, and the fuel so long collected at last spontaneously bursts into a blaze, and apoplexy ensues. It may be said that many persons have a predisposition to apoplexy. But what is predisposition? A word given by general consent of the profession for professed ignorance of latent causes. In apoplexy it may range itself under the head of anatomical defects; stout body, short neck, general plethora, and what I have had reason to notice, a smaller calibre of veins in comparison to the size of the arteries: hence the body becomes over-nourished by vital properties which the veins do not carry off sufficiently fast; the acid elements collecting in an immense ratio of increase beyond the necessary predominance which constitutes its law for health. In this complaint it reaches the pinnacle of natural endurance as a congestive acid action. The fit comes on suddenly; the brain, the stomach, and all the powers of the body become paralyzed. There is pressure everywhere, because elastic muscular power is gone. Nature, true to her laws, centralizes all her caloric or heat to disintegrate and chemically destroy morbid deposits; robbing the extremities and surfaces for these purposes. In this state the patient drops down a human mass of heavy paralyzed matter, and all the laws which I have endeavoured to define are contravened, and only await their final chemical, mechanical, electrical, and vital issue, in ceasing to act. Whether this disease arises from its lowest to its highest state, in the infant or the man, its laws are just the same. The convulsions of infancy do but portray the helpless system gorged, stuffed, and loaded by others, and that of adults by themselves. In the one, the instinctive disposition to take whatever is put to the mouth, till, with the most anxious care and solicitude, convulsions, or infant apoplexy is produced; in the other, by indiscriminating and thoughtless gratification of sensuality. Oh! hard-hearted doctors, who forbid the thick cupfuls of farinaceous pudding-like masses to be given to the little deities of a mother's love, feeding her infant gluttons to repletion! Oh! starving sons of Æsculapius, who advise more prudence in the gastronomic pleasures of certain systems; you may talk and warn, but the public will make patients for you against all your advice, then fly to you for assistance, quarrel with your fees if you save them, and if they die, leave all their affairs for others to settle.

Treatment by Medicine.—Give immediately on the attack in adults sufficient tartarized antimony as to produce an ordinary vomit, either in powder or in liquid (No. 9). Whenever there is pressure of a congestive character on the brain, there is always vomiting, therefore assist Nature. See in these aggravated cases of perfect helplessness, how the frothy mucus pours out of the mouth and nose! In lesser attacks, see the vomiting of the contents of the stomach when that organ is not wholly paralyzed! when consciousness is sufficiently induced, and the tongue can be protruded, see how it is loaded, coated, and furred. Here, then, is a condition for the use of the boldest application of alkalis (No. 7): the quantity of soda in this prescription may be doubled and be persisted in. On reaction taking place, blood-letting may be resorted to according to the case, if old or young, male or female. The convulsions of infants and children should be treated with emetics (No. 52), and vomiting well kept up; then the alkaline treatment (Nos. 45 and 46) adopted.

Hygiene, &c.—There is no disease of a spontaneous character more requiring a *well-regulated delay* to insure success than this; for never was more 'haste and less speed' so fruitful of evil. The patient, if an adult, should be immediately conveyed to bed and properly undressed, and placed on an inclined plane, the head well up; he is then in a position for all the strategetic rules of medical warfare. An emetic should be the first thing given to him, which should be done at the earliest period, before the instinctive actions are too paralyzed; for as long as he breathes he can swallow, and fluid resting at the back of the mouth must be swallowed for the instinctive act of breathing to be carried on; all this is time saved. He should be got into a perspirable condition as soon as possible by hot applications all over him. As soon as this takes place, the relief through the skin is so enormous, that the same action which produces it produces also a similar one on the internal skin or mucous membranes, and the first act is vomiting, caused by the emetic already given, showing that the paralyzed state is relieved. This must be encouraged in every possible way, and more of the emetic mixture given. The whole body first bathed in sweat, now eliminates heat to an enormous extent, and the whole mass of blood is brought into a more liquid state. The face and forehead reddens, and the veins enlarge. This state is called *reaction*, and *then, and not till then*, is the time for bleeding, and according to the subject, do it boldly. In the first conscious interval, begin the alkaline medicines; these will neutralize immense quantities of acid, and disengage the gases from the upper works—stomach, lungs, &c. The disease is now in hand: it is made simple, for it is only necessary now to follow the laws for the treatment of congestive actions.

Remarks.—I cannot but remark on the practice usually adopted on occasions of sudden apoplexies. The affrighted public pick up the heavy-breathing human mass and place it in a chair, and quick-footed messengers run for a doctor. They may have had the sense to remove the neckerchief, and unbutton the shirt-collar; but perhaps not. The doctor comes, ties up an arm, whips out his lancet and plunges it into a vein. He gets nothing, or next to nothing, for his pains: all the powers which should eject blood, or cause it to flow, are *paralyzed*. He next opens a jugular vein with a like success; that part is paralyzed also: he tries the temporal artery; that is in the same state: he places five, ten, or even more grains of his favourite calomel on the tongue, and after losing precious time, the patient is at last carried to bed if he lives long enough; after his best chances of life have been thrown away. More calomel is put on his tongue if he still lives, and probably after a time the doctor tries the lancet again with better success, and on the first appearance of recovery, saline or other brisk aperients are given. Perhaps these do not act, so more are given and more calomel; at last purging comes on; but what a miserable condition for a man unable to move! One of two things most assuredly happens: he either dies from exhaustion, or becomes a confirmed paralytic; and be his time here long or short, according to his age, he presents to the world a half-helpless specimen of humanity, owing his condition to the false principles on which medicine is taught and practised.

PARALYSIS.

This may be whole or partial. No paralysis happens without apoplexy, however low its character may be, for its highest is total paralysis. Partial paralysis is apoplexy occurring in a mild form, and fixing itself in certain localities. One side of the face may only become affected, or one hand, one arm, one leg. There is, however, gradation in this; one half the body, such as the lower limbs, may become affected (paraplegia); one entire side, face, arm, and leg (hemiplegia). Palsy is a species of paralysis; all are stages of apoplexy; and all are consequently sudden in their attacks.

TREATMENT, &c.—The same treatment may be adopted for these as for apoplexy; though bleeding may not be necessary in all, and the rules for the congestive actions may be followed. A constant and well-regulated warmth is imperative, and bed offers the best means of attaining this; and the application of hot salt or sand-bags. By this plan the chemical and electrical conditions of the body are kept up, and these are the funds to call upon when the disease first comes on; when these have been lost, and the chronic stages exist, then the external application of electricity and galvanism is most useful.

REMARKS ON CONGESTIVE ACTIONS GENERALLY.—It must have struck all who have followed my observations on these diseases, how little aperient medicines have entered into their treatment, and how much I seem to have ignored all received authority and all orthodox practices: so much so that it would almost appear as if I did not know them. Alas! I know them too well. Should I ever have had a diploma of any kind, had I not passed my examination in accordance with them? Therefore, taught and indoctrinated in them, I have yet been bold enough to differ from them:

nor have I done this without just cause; for, studying Nature's laws, and seeing them opposed and contravened so continually, I most heartily condemn all authority, coming from whence it may, and shake off all the trammels of schools at all hazards when philosophy, and what is even more valuable, common sense, are outraged by false principles. The largest percentage of all congestive actions are produced or have their origin in the upper works. The laws of health, which I have arbitrarily defined, and the laws of the first departure therefrom; the gradation assumed by the primary diseases, and the truth of these as illustrated by the discoveries which Glossological indices have revealed, are proofs that I do not condemn without sufficient cause. On the other hand, in doing this I do not fail to point out such modes of proceeding as will bear a thorough sifting into their truth or falsity in return. The uses of the large intestines as the prime generators of the vital gases, and from whence the vital energies are regained when lost, on many occasions are so important, that I am compelled to condemn the purging of these in many complaints. Disease is often aggravated by such modes of proceeding, as instanced in the blind way I have described in the popular treatment of apoplexy. If proof be further necessary I will draw attention to the next form of disease which of late years has deeply interested everybody, where there is purging enough in all conscience, namely—

CONGESTIVE AND INFLAMMATORY DIARRHŒA, CHOLERA, AND DYSENTERY.

If I were asked to define cholera, I should say it was the very opposite of a disease now extinct, called the SWEATING SICKNESS. This disease of former times would attack an individual, and so profuse was the sweating, that in a few days he would die a perfect skeleton. Neither urinary action nor action on the bowels took place. It was as if by some consent of the general system that every solid resolved itself into a fluid, which radiated through the porous structure of the body to the surfaces; the patient dying in his own self-made bath. Cholera seems the very reverse of this; for by a similar law, urinary action is arrested, and all fluids gravitate from the surfaces to the centres, collecting about the mucous membranes, when the whole mass of fluid elements fly over them in a liquid form. All electrical action ceases throughout the body; the nervous system becomes thereby powerless, the muscular actions are paralyzed, and the patient sinks. The mainspring of this is the loss of power in the large intestines to form the vital gases.

Let us see what is the process of decomposition in the sudden death of a healthy person. The life-loving nitrogen is the first to quit the body. Every gas, having no longer vital properties to support, seeks its most combining elements; solids are dissolved into fluids, and these again into gaseous vapours through other combinations, and fly off; and so the dead mass gradually decomposes. But in the two diseases above mentioned, while yet vitality exists, yet in so low a condition, the fluids have no time to form the gaseous elements, but fly off bodily.

Congestive diarrhœas in their mildest forms are Nature's efforts to rid herself of obnoxious acids, and are often beneficial to the system. These are not solely the result of morbid affections of the large intestines; far from it. Irritable substances come from the upper works, and the large intestines are only gangways through which they must pass, though they irritate them while doing so, and carry off *their* contents also. If they do not stop, it is incumbent on art to allay the irritation, especially if pain be present. Nature being relieved, there is nothing more to be done. If, however, they are allowed to go on one step further, the law of gradation produces English cholera, or diarrhœa in excess. This may become aggravated by the nervous action of pain; more, perhaps from flatus than any inflammatory action. Again, one step further and all the symptoms are increased, and then the elements in the large intestines, designed to form the vital gases, being carried away, the necessary electrical action in the system ceases, and if not restored on the one hand, or the flux stopped, collapse necessarily ensues. This is first felt in the mass of nerves or solar plexus at the back of the stomach, which loses the power of communicating the telegrams to the brain from want of electrical actions in the lower extremities, and cannot pass those downwards from the brain to the parts below. In fact the wires are cut, and the communication is stopped between the two extremities. Looking at diarrhœa in this simple light, and tracing cholera and its results, we have first to ascertain if these are effects of congestive or acid actions, or inflammatory ones, for herein lies the whole treatment. If the tongue is furred and white, then it is congestive or acid, and the disease may be traced to morbid conditions of the upper works, with which the large intestines have nothing to do. The causes lie where I have located them, and nowhere else.

INFLAMMATORY CHOLERA.

This arises solely in the large intestines, having little or nothing to do with the upper works; but the effects are in the end much the same. Inflammation of the mucous membrane of this part will often produce in it a morbid condition, which gets into a pulpy state, and large quantities of a jelly-like mucus mixed with actual membrane and blood come away. This is called DYSENTERY, but which is very different to inflammatory cholera of the same part; for dysentery does not involve the whole structure of the large intestines, but only the lower parts. The consequence is, there is enough fæcal matter left at the upper parts for Nature to gather a store of her vital gases. This state may be much prolonged; while inflammatory cholera forcibly ejects all fæcal contents, and if not stopped, the vital gases having ceased to be formed, electrical action stops, and collapse of the solar plexus is the result. Thus the same effect is produced as in congestive cholera. In this disease the tongue may be free from fur, but white and flabby, showing a debilitated condition of the system; or it may be clean and red, more particularly at the large intestine tract, showing the inflammatory action. As these diseases exhibit such opposite causes, the remedies for them must be equally opposite if beneficial or curative actions are to ensue. If the tongue points these out, there is also a corroborating evidence in the division of the head, as indicating parts of the body distinctly affected; for when congestive actions alone take place of the upper works, the back parts alone will be affected. In all these cases, vomitings, distressing nausea, and pains in the pit of the stomach are concomitant symptoms; indeed the irritation is so great that vomiting is incessant: this always indicates a morbid condition of the great central plexus of nerves at the back of the stomach. If the large intestines alone are the cause and seat of the disease, there will be little effect shown at the back part of the head, but in the forehead or front part. For what do we see in all morbid conditions of the large gut, but affections, more or less, of the reasoning powers; as fear, alarm, and the greatest anxiety of countenance, both from constipation as from excess of action; but this is not seen in the diarrhœas from derangement of the upper works with headaches at the back parts; while a few brisk choleraic purges from the large intestines will strike the giant down in a few hours to the frailest condition. Diarrhœa may be produced from fear; for this is arrest of the reasoning powers, which act immediately by relaxing the sphincters of the lower part. This is a singular proof of the direct influence of the one part on the other by reflex action. It may be caused also by irritating substances which the digestive powers have been unable mechanically to neutralize, also by excess of bile poured out by the liver, finding no substances to act upon. This is bilious diarrhœa, which has no great depressing effects. Diarrhœa may also be caused by the absence of bile, when the stools are clayey or white: this is a very opposite condition, always attended with certain depressive feelings and griping pains, because the fæces are deficient of those elements which make vital gases, and consequently the electric currents. As certain localities produce costiveness in some habits, so others will predispose to diarrhœa, which, being favoured by climate and other circumstances, advances into the Asiatic stage. Certain conditions of the system must always be favourable to these attacks: it is the duty of science to find these out. Diarrhœa and cholera, therefore, claim their distinctions into CONGESTIVE OR ACID—INFLAMMATORY OR ALKALINE; and unless these are clearly defined, it is impossible to treat them with certainty. This is the fault of the present practice of medicine. There are no such definitions now made, certainly not as regards the medical treatment; for if inflammatory action is so glaringly present as to be admitted, the treatment is as likely to be of an alkaline character as acid, indeed more so, and so things are made worse. The government inquiry into the cholera of 1854, and the great blue-book reports, form a monument of evidence and labour in everything but in the desired conclusion. Any faithful treatment of cholera, as far as that report is concerned, remains just where it was previously. It reiterates all we knew before; viz., that improved hygienic observances prevent diseases of all kinds, and the reverse produces them; but it presents nothing useful in actual or certain application of medicine when disease is present, and for which I am now contending. One plan did not seem to benefit more than another; the key was lost of this great Hobbs' lock, and nobody could pick it. The French have offered a large monetary prize to any one who will propound a cure similar to vaccination, to destroy the cholera-poison in the system. They are quite safe in doing so, and if they keep the fund till then, they may pay off the national debt of France. There is no specific poison in the blood in this disease, like that which produces small-pox. Cholera is the gradation of actions as I have shown them, and can only be combated by laws properly understood, and these are of a simple character.

Treatment by Medicine.—All the rules of treatment of congestive and inflammatory actions are to be here obeyed. The tongue rigidly studied, and headache at any given part noted. The simple acid diarrhœa may be cured by a little soda, or prepared chalk with sal-volatile (Nos. 1 to 6). If pain in the large intestines be present, from the too rapid and frequent passage of irritating matter, an opiate is called for (Nos. 77 and 78), because the first stage of an inflammatory action may be induced, which this instantly checks. If congestive diarrhœa or cholera occur in the large intestines, known by the white and furred tongue, the largest doses of prepared chalk may be given by itself (No. 21), and the opiate pill (No. 78). One of the most important points to be considered when vomiting and purging come on together, is the irritable condition of the stomach. If any one supposes that filthy nauseating medicine is to be taken with impunity, because the schools and routine sanction and teach it, he will be, as he always is, grossly deceived. The combination of laudanum, chalk, catechu, peppermint, and such-like horrid compounds are enough to make any one sick, much more a stomach already nauseated enough. In such cases the more tasteless and plain the remedies, the better. The chalk is almost tasteless; it is alkaline, and combines with the fluids in the system, and solidifies them; an opium pill dropped into a teaspoonful of thick arrowroot made with water, is tasteless, and if the patient is not told the pill is there, so much the better. If prussic acid is given, let it be done by the judicious physician in tho simplest form, not combined with anything that will nauseate. These are the simple means I have found practically available in these cases. Next come those for the inflammatory stages. These are almost always confined to the large intestines, when the acids and opiates are called into use. In these cases the nausea is not so great, and acids should always be combined with an anodyne (Nos. 31 to 33); this may be accompanied by the opiate pill (No. 78). The form of acid preferable in violent cases is the nitrous (Nos. 22 to 25). The more simple and tasteless the remedy, the better the system will bear it: but that remedy must be the right one. If chalk and alkalis are given in inflammatory actions, denoted by the red tongue, and if acids are given in the congestive stages, as denoted by the white furred tongue, the disease will most assuredly be increased. It is owing to these mistakes that both doctors and physic have been blamed, and not without just reason. How was it possible under such circumstances for any correct conclusion to be drawn from the immense amount of evidence collected by the government commissioners, of what was the best remedy for cholera? The statistical tables of the number of persons treated by the various remedies show average results, and that one treatment was no better than another. Such was the conclusion to the only point of the government inquiry, which cost the country sixty thousand pounds.

The simple fact of the appearance of the tongue indicating when one of the opposite remedies should be applied, never having entered into the calculation, not only the treatment of cholera, but all benefit to be derived from the inquiry, entirely failed. The next time such an inquiry is made, these simple rules should accompany the paper to be filled up:—

(*a*) In all cases of white furred tongues, the cholera is acid and congestive, and requires alkaline and anodyne remedies.

(*b*) In all cases of red or clean tongues, it is inflammatory or alkaline, and requires acids and opiates.

(*c*) State the result when these rules have been opposed.

I have no hesitation in saying, that when natural laws have been obeyed, and the two distinct classes treated as I have propounded, they will be found to be favourable, but when they have been contravened, they will be found unfavourable, to recovery.

HYGIENE, &c., FOR CHOLERA, &c.—Common sense seems to direct all these various stages. There is loss of vital heat through loss of electric power; heat, therefore, everywhere applied is of the utmost importance, both as a direct as well as an indirect agent. Galvanism produces this latter action, and assists the functions of organs which are in abeyance, especially the skin and kidneys. Therefore it is most important to restore these lost powers, for when both act in unison the case may get into a safe groove. In common cholera, red-tapists order 'SLOPS;' SLOPS TO SLOPS! why the system is nothing but SLOPS already. There is no condition that requires the uses made of the natural chemistry of the body or self-dependent powers more than in these diseases. The best and most nourishing meats that can be got, nicely roasted, baked, or broiled, should be given to the patient; a piece put into the mouth with directions to take a long time in masticating it, so as to use the salivary secretions as natural medical agents. These are not to be got by giving slops. No one thinks of Nature's own pharmacopœia, by which her own vital chemistry is set to work; by friction, as well as the chemical actions of the acids and alkalis, her own galvanic batteries produce electricity, and consequently heat. A well-masticated pulpy mass going into the stomach, gives that organ some of its natural duties to perform, and some power will accrue. 'Oh! but it may be rejected by the stomach,' say the schoolmen; well, so are slops; with this difference, however, that in the former case some power is gained, while in the latter it is lost in both ways—watch the case—by all the laws of the uses of the organs and their secretions. Fluids and slops must be cautiously administered. In all cases of cholera these few hints will serve to point out the course to be pursued to nourish the system by actual aliment, and to make use of the natural powers within.

In common diarrhœa the same caution is not so necessary, except to avoid slops. A good mutton chop two or three times a day, with plenty of salt, and some porter or bitter ale is the best diet. While the bowels are irritable, little bread or vegetables should be given. Everything that plain common sense dictates, however opposed to routine, should be adopted. This above all, that in the congestive actions denoted by the white or furred tongues, roast, broiled, and baked meats, good beef tea, and such-like diet are best. In the inflammatory stages, denoted by the red tongue, boiled meats, mutton, veal or chicken broths, milk, &c., are the best, because all these produce acid elements in the system, and help the acid medicine. But if these acts are reversed or infringed, all Nature's laws are equally set at nought, and a sort of professional and scientific homicide is the result. I have seen patients fast recovering after much labour and care from attacks of cholera, diarrhœa, and other congestive mucous membranous diseases, actually killed by a basin of mutton broth, or a milk diet. But this is all of a piece with the same want of division in medicine.

Remarks.—There are two points I have to remark upon in all these cases. The first is the iniquitous use of calomel and the mercurials. Nothing but the folly of routine, the bigotry and intolerance of schools, and the want of scientific knowledge bearing on all the philosophical points of these diseases, now sanction their use. Authority is often but a stagnant respectability; once let me excite young minds against its prejudices, and with the aid of their own intelligent observations I will uproot this homicidal practice. Granted that large doses of calomel may so rouse a thousand actions in the thousand laboratories of the body, and effect a cure in one case; but ten will die from them: better then have one to die than kill ten. The second remark is on another folly equally culpable, and that is when the flux has been stopped, bigotry, prejudice, ignorance, and all that comes under the present denomination of rules of schools, will not let the bowels alone; for no sooner have they been stopped, than twenty-four or thirty hours are not allowed to elapse before the dreadful drugging system is adopted to open them again, and so bring back all the symptoms, with death in their train. Why not keep them quiet when they are so, for a week or a month if necessary? There are plenty of facts for this practice, though evidently excluded by pedants and schoolmen, why and how long the bowels may safely be left quiet. If I have stated certain new laws for the gaseous and electrical elements of the system to be evoked, and the great seat of them to be in the laboratory of the large intestines; tell me how long it must take after a severe attack of cholera before they can in any way receive or retain sufficient fæces to fabricate these? What thousands of our glorious Anglo-Saxon race are yearly offered on the hecatomb of miscalled science, and die secundum artem! It was but a short time since I made a remark to a young army surgeon of the opportunities he had for practice, and the trial of his skill in cases that came before him. 'Ah!' he said, 'if you dared transgress the rules laid down by our *Medical Board* for all cases, and your returns were not in accordance with them, you would be tried by court-martial, or cashiered at once from head-quarters.' 'What!' I exclaimed, 'does red tape bind up the very cerements of those which it has killed? Does Government check the very sources of young intelligence and science, and with its iron hand fetter the very minds of those to whom the dying veterans look with hope for a little longer life to serve their country?' No wonder the medical profession has not been better thought of, when so circumscribed by old prejudices and bigotry, which allows no deviation from their established rules. It shows that a people may become enlightened, and yet suffer the most important branches of their government to rule them with the grossest ignorance and inhumanity.

Up to this point it will be seen that I have spoken only of those disorders which are of a direct congestive character, but merging frequently into inflammatory conditions, yet still unattended with what is generally termed fever, to any extent. Nevertheless it is important to know that a natural law in their gradation, points out a distinctive treatment, even when they are coexistent, as in acid stomach and sore throat. I will now show the gradual progress of these into direct inflammations and fevers.

CHAPTER XII.

BLOOD-FEVERS—CONGESTIVE AND INFLAMMATORY, ACCORDING AS THE POISON IS IN THE VEINS OR ARTERIES.

Measles.—Influenza.—Scarlet-fever.—Pneumonia.—Peritonitis. —Pleurisy.—Muco- and Sero-Membranous Inflammations.

Measles and influenza, early symptoms of, mild and dangerous; are veno-congestive actions of mucous membranes—Treatment, &c.—Scarlet-fever, early symptoms of, mild and dangerous; are arterial engorgements of mucous membranes.—Diseases which follow after measles and scarlet-fever—Treatment, &c.—Atmospheric inhalations.—Medicine, diet, and hygiene perfectly opposite in each.—Pneumonia a veno- as well as sero-membranous disease.—Peritonitis, a sero-membranous disease or arterial engorgement.—Pleurisy, ditto—accompanied by muco-membranous congestion of the lungs.—Importance of the tongue in developing the presence of peritonitis forty-eight hours at least before any other means of diagnosis.—Treatment of pneumonia, peritonitis, and pleurisy.—Doubtful and even pernicious use of the mercurials.—Skin eruptions, Nature's counter-irritants, more frequent in congestive actions — Blisters, &c.— Man's counter-irritants more useful in congestive than inflammatory actions.

Measles and influenza arise from irritable conditions of the mucous membranes from congestive, going gradually into feverish, actions of the blood, especially in the venous circulation. The symptoms are watering of the eyes, running at the nose, shortness of breath, coughs, sneezing, from stomach irritation, and general uneasiness for several days: this is called sickening for the measles. Nature has in fact set up her own cure, by removing morbid elements, by absorbing them into the system, thus poisoning the blood. An effort is then made to get rid of these through the skin, hence minute spots forming themselves into patches of eruption appear at first on the face and chest of a bright colour, and then going off into a brownish tinge: these will gradually exhibit themselves on the lower parts of the body without much regularity. All the primary or instinctive parts are the more especial seats of this complaint at the onset. If the eruption continues over the chest and trunk, instead of showing itself on the lower extremities, the case always assumes more dangerous features, because the lungs are most oppressed by congestion. When the eruption comes quickly on the lower extremities, the safer the patient becomes. The great majority of cases are of this mild type; but the law of gradation will often show itself in this disease, and implicate the higher state of the circulation of the blood in the arterial vessels. Although it is a fair conclusion that measles only happens once in the lifetime of an individual, there is no law to prevent its appearing a second time. The tongue in measles is generally white and furred, as in other congestive actions; but if the lungs have not been relieved from this oppression, inflammatory action succeeds, and this is generally a pure bronchitis, when the lung tract becomes denuded of its fur, presents a red appearance. Measles in adults seldom merges into bronchitis.

INFLUENZA in many points much resembles measles, but is unaccompanied by eruptions, has less fever and more general depression. The fact that measles is more an infantile disorder than influenza, and influenza an adult disease more than one of infancy, considerably alters the character of it. To the close observations of measles I am indebted to the first glimmering of the peculiar alterations on the surface of the tongue; but to the epidemic influenza of 1836-7, I owe the discovery of Glossology. The four great tracts, viz., those of the stomach, lungs, large intestines, and brain, were then fully confirmed in my own mind, from the vast number of cases I saw, while the distinctive treatment I was compelled to adopt, at once aroused me to divide the drugs I used into distinct classes. Nor did I see exactly at that time why one set of cases were evidently benefited by the distinct acids, and others by the distinct alkalis. It was a work of time to found any sound principles or philosophy on these facts.

TREATMENT BY MEDICINE.—For infants: if the tongue is white, furred, or coated, Nos. 1 to 3, which must be persisted in should the lungs exhibit an oppressed condition. If the tongue is clean without being very red, Nos. 57 and 58 are the best forms. In cases that run into bronchitis with the lung tract on the tongue red, Nos. 59 and 60. In adults where there is seldom any inflammatory actions, but a sense of tightness on the chest with cough, Nos. 12 and 13; attending to the stomach by other alkaline medicines (Nos. 1 to 6). Early vomitings in this disease, either naturally or by emetics (Nos. 8 and 9), often cut short the violence of the attack. In mild cases very little aperient medicine is required during the presence of the disease; but when the more active stages have passed, it is always necessary to act well upon the bowels: if this is not done, the blood-poison left in the system causes swelling of the upper lip, and skin eruptions, especially of that class called running sores, when the matter dries on the surface and forms scabs, all for the want of purging after an attack. This is pre-eminently a disease that is the original parent of many; of itself often of small account, but leaving behind a parting curse; and this clearly shows that the blood-poison is in the veins, and that the disease is acid or congestive, and that the after eruptions, or skin diseases, are Nature's counter-irritants. For infants the aperients may vary according as they are of gross and full congestive habit, or weakly (Nos. 46 and 63 to 68). In influenza the appearance of the tongue must regulate the treatment, whether it is of a congestive or inflammatory character; or the state of the patient weak and debilitated. All the rules of these two distinctive actions are to be attended to.

Treatment by Hygiene, &c.—The measles eruption should not be checked; if it is, the lungs become much oppressed. Therefore keep the patient warm, do not even change the dress, nor attempt any ablution; there will be plenty of time for this afterwards. A few days or a week in bed unwashed and unchanged, is a safer process than to risk life by driving the disease to so vital a part as the lungs, and then to have recourse to bleeding or leeching with a doubtful issue. In the sickening for this disorder, the warm bath has been resorted to, to develop it; but this is dangerous; better apply warm or hot flannels and induce a perspiration in bed, when, on the appearance of the eruption, the patient can be kept there. No solids should be taken of any kind, but every warm and demulsive drink in quantity if necessary, and the very weakest of milk and water for infants if they are weaned. When the eruption turns brown, with interspaces of the original appearance of the skin, and all the lung symptoms are gone, then plenty of warm soap and water if necessary. Still I do not recommend the bath or total denudation for some time. When the washing begins, the aperient process may accompany it, which should be moderately persisted in, once or twice a week for several weeks—presuming that the usual diet has been resumed. This should consist according to all the rules for the congestive states. The roast, baked, or broiled meats, according to the circumstances and ages of the parties affected, and all that class of diet which makes but little acid in the last act of digestion. The system should be well supported, so that while old morbid materials are carried away, new and nourishing should be given. In INFLUENZA the diet and hygiene should accompany the medical treatment; but as debility is the greatest characteristic of this attack, feed well, and support the system, and in opposition to the after treatment of measles, have as little to do with opening medicines as possible; leave the large intestines alone, for if costive, Nature is building up the system; but if loose, rather check them than otherwise. Measles being the type of congestive fevers in the venous system, there is no remedial action in such states so beneficial as perspiration, for all the organs continue secreting largely, showing that the arterial blood is not affected, or this would not occur. Where fevers affect the arterial circulation, a totally distinct train of symptoms and phenomena present themselves, as in scarlet-fever.

SCARLET-FEVER.

This disease sets in by shiverings, pains in back and loins, headache, and general uneasiness, and a scarlet rash over the chest and stomach, spreading down the body and limbs. It may be called the sudden effort of Nature to burn up all congestive fuel in the system, and this she does in a most rapid way. The furred tongue at the onset, showing the congestive state of the stomach, and all parts concerned in digestion is accompanied by sore throat. The sudden and rapid respirations resemble those of measles, or the venous or bronchial congestion of the lungs; while the rapidity with which Nature rids herself of the elements which produce these actions causes a perfect denudation of the mucous surfaces. We next find the stomach membranes inflamed, and the bronchial congestion suddenly assuming bronchitis, and the whole lining mucous membrane of the intestines deprived of protecting covering, consequently becoming inflamed also; not only this, but the muco-membranous lining of all glands are in the same state. The capillary circulation is suddenly arrested in its duties; all the terminal extremities of the arterial structures become engorged, and the tongue presents over its whole surface, throughout every tract, a perfectly red appearance. No disease so completely illustrates every fact I have mentioned in the law of gradation as this: all the cooling secretions of the body are checked or absorbed; perspiration ceases, and urine cannot be formed in quantity. How can it be otherwise, when the fever has consumed all elements which produce them? The myriads of red points on the skin are so many fire-points, destroying its whole integrity, because they have consumed the fluid between the two skins. These points appearing like a rash, spread rapidly down the arms and legs, destroying the upper skin, which ultimately peels off; whilst the inner skin or mucous membrane is similarly affected wherever it exists. If, then, the whole outer skin has to be renewed, so has the whole internal mucous membranous lining. It is to this fact that the parting curse of this disease is due. If the lining membranes of the glands, and all secreting organs, as well of the alimentary canal itself, become renewed with facility, by the destroyed membranes coming away, and the new taking their places in a healthy manner, then no difficulties arise; but if it cannot, then scarlet-fever is the prolific source of many diseases; but these are very different to those of measles. The glands and secreting organs may be blocked up with the old or destroyed membranes, and their actions being impeded, DROPSIES are the result, from the absorbent vessels being rendered useless; on the other hand, the glands about the neck enlarge from engorged actions; and abscesses form in them. The internal glands, from the same causes, assume the character called strumous, or scrofulous, and ever afterwards persons may be subjected to what are termed glandular enlargements, especially about the bowels. This disease is peculiarly an arterial one, and totally opposite to measles, which is venous: this will be seen in its treatment, both by medicine and hygiene, although they have always been more or less associated; yet one would have supposed that the empirical treatment of them would at once have pointed out their diametrically opposite characters. Although the empirical treatment of scarlet-fever is not free from blame as a matter of routine, still it is correct in many of its phases, even though uncoupled with any philosophy. This disease may be very mild, or very severe, according to the condition in which it finds the system. If it confines itself to muco-membranous inflammation, it may yet range up to a dangerous point; but if the serous membranes become involved, then the malignant type sets in; the tongue fouls and becomes dry, giving that unmistakable typhus or typhoid appearance, whilst the common ulcerated throat becomes gangrenous and sloughs, and the skin takes on a purple hue in patches. The disease is in fact removed from its usual seat in the milder cases, or from one set of membranes to another; namely, FROM THE MUCOUS to the SEROUS. The danger of the case varies according to the attack and seat of disease. Mild cases may be aggravated by injudicious treatment; yet at another time the system may present such conditions that even the most philosophical treatment may not be successful. Again, the most dangerous symptoms may be resisted and overcome by proper remedies.

TREATMENT BY MEDICINE.—The very opposite for that of measles. The acids and anodynes (Nos. 31 to 34). It has been recommended to give an emetic in the onset of this fever as well as to purge: *both are most pernicious*. See how quickly the fever has burnt up all the fluids, then ask the question if there are any to be carried away by either of these processes; Nature has already done it to excess. The medicines which empiricism has found to be beneficial prove this: acids are tonic, and designed to add to the system that of which it is deficient; whilst anodynes or opiates arrest the activity of the fire, and consequently the further absorption of fluid secretions, and keep them in the system. These medicines should be given very frequently, and swallowed slowly, because the acid acts as a gargle to the ulcerated throat. Adults may understand how to gargle, and this may be done with acid gargles in addition to the medicine; but with infants and children who cannot do this, the medicine frequently given in small quantities serves the two purposes. According to the violence or virulence of the disease, so the acid medicine should be increased, and I have found no acid so good as the nitrous (Nos. 22 to 24). Belladonna, on account of its peculiar action in all arterial diseases, and the sedative effect in highly-excited nervous actions, is very useful; but this should be given under the experienced eye of the physician. Empiricism has lately recommended some of the neutral salts, such as *chlorate of potass, ammonia*, &c., but any alkaline agent or reagent I hold to be totally opposed to the philosophy of the cause of the disease, as well as its treatment, and therefore unscientific and pernicious.

Treatment by Hygiene, &c.—A moderately cool room, with very little light, but well ventilated; frequent spongings over every part of the body with warm vinegar and water, not too strong—one part of vinegar to two of water—is most grateful. This refrigerates the body and helps at a future stage the peeling of the skin. Wherever the body is the hottest this should be done the most frequently; but care must be used that even in this fever the distribution of heat should be regular. If the feet become cool, which they frequently do, they should be covered up and not sponged; but if they become too hot they should be refrigerated. Nothing is more grateful than the burning of vinegar in the room, by pouring a little on some hot coals in a shovel. Here may be mentioned the fact of the distinct acid and alkaline treatment even in what is breathed or smelt to. In all congestive or acid actions, ammoniacal smelling-salts are as grateful and proper to the system as the alkaline treatment by medicine; whilst in those cases where the acid treatment is called for, the aromatic vinegar and vinegar fumes are most grateful. In sick headaches from acidity of stomach, aromatic vinegar does harm and increases them; in measles, the fumes of vinegar are stifling and most nauseous; whilst in scarlet fever they are grateful and curative to the air-tubes of the lungs. In this disease the drinks should be acidulated, lemonade, &c., and all should be taken cool. Milk and water with sugar, first made hot, then stood to cool, is a nice drink; blancmange, arrowroot made with milk, tapioca, and sago puddings with milk are also good. If the temperature of the body sinks, mutton, veal, or chicken broths are good, and wine may be added to the arrowroot, or a little port wine and water be given; all these in accordance to the case and its requirements; recollecting that the medicine and diet are designed to one end, namely, to restore those acids to the body of which it is deficient. The one acting directly, the other indirectly, because these have to be acted upon themselves by Nature's laboratories. Thus it will be seen how totally opposite is scarlet-fever to measles. In mild cases, the judicious use of all these things have only to be persisted in *on principle;* in severe cases, where typhoid symptoms set in, elements must be supplied to the system to give it that which it cannot get by indirect means; so that in addition to the medicines prescribed for these, stimulants are urgently demanded. Port wine and claret stand first, then white wine, brandy, or rum and milk: in fact everything that will assist the decaying powers of the body and supply to it that which it fails to do of itself. The great SCIENCE of medicine must be always understood to be that which assists and goes hand in hand with the efforts of Nature herself, in contradistinction to the ART of medicine, which implies an empiricism for the application of medicine in hope. Things done with the best intention without philosophy entering into their calculation in any way, though it is supposed to do so, can never be called SCIENCE.

REMARKS.—Thus, fever-poisons are seen to be of distinct characters, producing different diseases. MEASLES is the type of congestive or venous fever, and SCARLET-FEVER of arterial inflammatory fever; both diseases affecting the mucous membranes, and often running into a malignant form by sympathetic laws through the nervous or electrical system and attacking the serous membranes. Another fact may be observed in these diseases as bearing forcible evidence of what I have said, viz., that the eruption of measles predominates more at the great venous terminations. The face, neck, and trunk showing the greater development in measles, and not going down the body, but rather coming out in patches in the course of the upward current of the blood in the veins; whilst in scarlet-fever, the eruption will display itself first in the chest and trunk, and following the course of the arterial circulation, will run rapidly down the body. Therefore, in measles the eruption from first to last will be most conspicuous in the face and upper parts, whilst the reverse is the case in scarlet-fever; the terminating extremities showing the greater effect of the disease; hence the peeling of the skin of the hands and fingers, &c.

If bronchial congestion will run into bronchitis, and from the blocking up of the extremities of the bronchial tubes, air is forced through the lining membrane of the lungs, inflammation will occur, or pleurisy (pleuritis); so a certain congestive action will also force air into the substance of the lungs themselves, which is their serous structure. This, as well as when the arterial structure is affected by an engorged action, produces a distinct and dangerous disease,—PNEUMONIA. In many cases of congestive action of the bowels and great distention of their calibre, air may be forced through them precisely in the same way, and the disease be thus removed from the internal to the external lining, inflammation being produced therein known as PERITONITIS. This also occurs from engorged condition of the arterial system with a certain blood-poison present. In all these cases disease is transferred from one set of vessels to another; that is, from the veins to the arteries, both by gradation and sympathy. All these latter diseases are more of a violent character, and are attended with danger to life.

PNEUMONIA, PERITONITIS, AND PLEURISY.

The actual substances of the lungs consist of little more than the external coats of all the vessels; the air tubes forming the largest parts; then those of the arteries and veins and all other vessels engaged in the circulation, such as the absorbents, &c. When the lungs are collapsed by a deep expiration they are small, but when filled with air they are large. When all these outer coverings are inflamed the disease is called pneumonia, and is the most active and dangerous by which the lungs can be attacked, besides being very complicated. It is a congestive or veno-membranous, as well as an engorged or arterial sero-membranous disease. It may readily be supposed that membranes lying so conterminously and having such sympathetic actions should, when one is affected, involve the other.

The treatment of this disease shows its different phases. The symptoms are fever with hot, dry, pungent skin, to the touch like a metallic heat; great anxiety of countenance and difficulty of breathing, which is done by rapid and short inspirations, because the lungs cannot fully and freely expand; this instinctive action informing the patient that pain ensues in his attempt to cough or to take a deep inspiration. The pulse is quick and sharp, with a hectic flush on the face, often of a bluish tinge; the secretions are arrested and consequently excretions also, for when the skin cannot secrete in cases of this kind, the kidneys act feebly, and the urine becomes scanty and high coloured. The bowels are also confined; the mouth is parched with thirst. The tongue is red, or brownish red, and contracted, and from the fur becoming dry, it often presents a cracked appearance; the expectoration is thick and gluey, and tinged either with blood, or is of an apricot colour.

PERITONITIS.

This is arterial engorgement or inflammation of the internal lining of the walls of the abdomen and external coverings of the intestines, or their serous membranes, attended with intense pain over the abdomen; so that the lightest clothing can scarcely be tolerated, the pain being most intense round the navel. Anxious countenance, fever, quick and sharp pulse, dry skin; secretions and excretions not arrested so completely as in pneumonia. The tip of the tongue dry and brown, or brownish red, which appearance runs up the whole of the centre or lung tract, while the stomach and kidney tracts will present alternate dry and moist appearances, indicating the want of power of the secreting organs; while the edges or brain tract will show alternate rose-leaf appearances, or become bright scarlet, according to the sympathy of the brain membranes.

PLEURISY, OR PLEURITIS,

When of a new and active character, is attended with pain in the side, quick and sharp pulse, flushed and anxious countenance: secretions and excretions not so much arrested as in peritonitis; and this is clearly distinguishable in the appearance of the tongue, for the lung and other tracts may be furred and moist, whilst at the termination of the lung tract an oval red spot may be distinctly seen. Chronic stages of this disease are very common amongst female servants, to which I have before alluded.

Here, then, are inflammations of serous membranes or arterial engorgements with fever. Pneumonia, though a distinct disease of the substance of the lungs, is nevertheless sympathized with by other internal serous membranes. The early discrimination of the sympathetic actions of peritonitis are of the greatest importance to the physician and surgeon. Here the appearances of the tongue afford not only evidence of its latent existence in fevers, but the presence of inflammation after operations, especially those of the lower extremities. It needs no great skill to detect it when it is actually present, its symptoms are so patent, but to know its incipient stages forty-eight hours at least before it actually develops itself, is to save so much time, especially when the disease can be immediately stopped, which is not so easily done when fully disclosed. Take for instance a surgical operation of the lower extremities ending fatally—what is here the law and gradation of disease? It is this; as unerring and as certain as Nature's wisdom can show it:—Inflammation of the serous membranes covering the muscles first sets up; nervous sympathy carries it along like lightning into the abdomen; peritonitis sets up, and when it can only be discovered by ordinary means, it has already lasted two days at least, and then the sympathetic action has reached the lungs; for often coincident with this, difficulty of breathing ensues, and before remedies can be applied the patient dies of pneumonia. It may be called peritonitis, as there is peritonitis, but it is to pneumonia that death is due. If the discovery of the Glossological symptoms were confined to this one thing only it would be a boon to the true science of medicine as well as the saving of life. Let me warn every surgeon who operates on the lower extremities above everything to watch the tongue. If he cannot do so himself, let it be done every hour or two by watchful eyes; the insidious approach of peritonitis will be indicated by the tip of the tongue or large intestine tract becoming red, then dry and brown, then a distinct dark colour is presented up the centre or lung tract. It is unmistakable; but it is at present an unknown, unrecognized, unadmitted fact, and if seen no importance is attached to it; but it is life to the patient, and a triumph of science to the surgeon. He knows by this what otherwise he would not be informed of but too fatally late; namely, that there is incipient peritonitis and pneumonia. Disease can now be stopped by a few doses of dilute sulphuric acid with an anodyne or opiate. In forty-eight hours later, no amount of bleeding or calomel will stop the grasping hand of Death; that fatal cry—'too late,' must be sounded. Patients who die under these rapid conditions are reported to sink under the *shock* occasioned in the system by the operation. But the term *shock*, like that of *predisposition*, is not satisfactory to science. Science must sound the very depth of causes. None of these sero-membranous diseases can possibly come on without gradation of causes. The tongue not only offers a ready exposition of the actual seats of disease and the sympathies which produce them, but the state of the system itself, and the character of medicine to be given; yet Glossology is pooh-poohed, many fellow-creatures' lives lost, and medicine continues a mere art in consequence.

Treatment by Medicine.—First as to Pneumonia: here we have not only the substance of the lungs engorged with blood, but the lining membranes of the air tubes congested with mucus. Tartarized antimony offers itself as the fittest remedy, and large doses can be tolerated by the system. This shows the complexity of the disease, and that it is cured through the mucous membranes. It shows also the actual distinctiveness of this disease from others of the serous membranes. If the tongue becomes dry and brown, the acid and anodyne treatment is the fittest (Nos. 31 and 22 to 24), with the further addition of an opiate pill (No. 78). If the tongue becomes moist and furred, then the alkaline treatment (Nos. 1 to 6); if it becomes dry again, then the return to the acid; thus keeping the system balanced. Blood-letting may or may not be necessary; that depends on circumstances and the patient. The bowels should be left to themselves; if they act naturally it cannot be helped, but no aperient should be given.

Peritonitis should at once be treated with the acids, anodynes, and opiates (Nos. 31 and 32), and no aperient given; while the tartarized antimony is inadmissible.

Pleurisy should be treated, according to the indications of the tongue, with either acids or alkaline medicines; thus acting through the mucous membranes.

N.B. Empiricism has eulogized the mercurials in all sero-membranous diseases; but as I respect no authority, seeing that that can only be obtained by the same means left open to myself, namely observation in the book of Nature, I most heartily condemn their use, and more than this—believe them to be most injurious and pernicious to the system, when the acids and opiates offer equal efficacy in the relief and cure of many diseases where mercurials are now used. What may be said of the calomel and opium system is, that authors and their empiricism are all at loggerheads; for some affirm that the calomel does the good, and others the opium; and a third party both combined, while a fourth declares for calomel alone, and a fifth for opium alone. A successful result happens in them all, and on the contrary it as often fails. Is the treatment to be cried up in the one and not condemned in the other? Surely what is sauce for the goose is sauce for the gander! Calomel and in fact all the mercurials are cumulative in their actions, and one powerful reason against their use is, that they are irritants to the system; so that when the bowels ought to be kept quiet these chemicals play havoc with the curative actions of Nature. Empiricism may guard them with the opiates, but when the effects of these latter go off, then they are set free on their pernicious errands. All these matters will be clearly seen some day, and a vast amount of error swept away from the empiricism of drugging.

HYGIENE, &c.—PNEUMONIA.—When tartarized antimony is administered, fluids should not be taken in quantity. A teaspoonful of water frequently given relieves without interfering with the medicine, and serves to moisten the mucous membranes. This of course is a case for slops and all bland substances; recollect the arterial structures are affected, and digestion can be but ill performed; solids are therefore inadmissible. If low or typhoid symptoms set up, stimulants must be given. The air breathed should not be too cold, therefore the temperature of the apartments should be looked to.

PERITONITIS AND PLEURISY.—The stomach and lungs not being much implicated, a more advanced diet should be afforded; but all this depends on the tongue's indications, and the rules for diet should follow those for drugs.

PLEURISIES.—The diet after the severe stages should not be too low.

N.B. Thus it will be clearly seen that inflammations of the two great protecting membranes—the mucous and serous, illustrate the gradation of venous into arterial disease, the one being the stepping-stone to the other. Not only this, but that the muco-membranous inflammations are more under control of remedial agents than the serous, consequently the vital organs come sooner into healthy functional conditions—on the other hand the serous membranes have to rely on the mucous membranes; for as we cannot ignore the steps that were taken which brought us to them, we must also retrace them. Having watched these, I firmly believe that the assumed good done by the mercurials in the sero-membranous diseases arises from the sub-acute inflammation produced on mucous membranes by their use; consequently, disease is only transposed from one class of membranes to another—a fact that is not at all creditable to science, and condemns empiricism. This proceeding is a fruitful source of prolonged convalescence, and in many constitutions lays the foundation of disease and death—thus only prolonging life at the expense of greater misery and suffering from a host of other diseases. These I have long recognized and classed under the head of "drug diseases," which have ever given me more trouble than natural ones. All these latter are simple, all the former complex—for the system in them presents so many features similar to diseases from actual poisons. So that these have first to be overcome or reduced to natural conditions before the others in their turn can be corrected. It will be seen, too, that the congested mucous membranes will produce inflammatory actions very different in character to the serous, that the seats of these are more especially in the venous circulation, and are the fruitful causes of eruptions. Many of these which come under the head of skin diseases are evidently efforts of Nature to rid the system of its morbid poisons; so that it becomes simply Nature's choice of fevers or skin disease. This offers again a great field for the really practical observer in the treatment by counter irritation. Eruptions are Nature's counter irritants;—blisters, mustard poultices, tartar-emetic-ointment, &c., are man's counter irritants. Congestive or venous and acid actions produce more skin diseases than engorged or arterial inflammatory actions. What is the inference?—why, that medical counter irritants are more called for to relieve the parts most oppressed in congestive than inflammatory actions. Thus a blister or mustard poultice relieves more in bronchial congestion than in bronchitis ; and so in all similar cases when the two are clearly distinguished, and this can only be distinctly done by the appearances of the tongue. If we looked at and studied more diligently Nature's acts in disease, and really one would suppose this had been done, for the reader of the old marine stores of medical literature will find them in abundance, and like their modern prototypes find many articles of great use and service though old, but which only want to be applied to their proper uses. One fact is of the greatest importance as distinguishing fevers resulting from blood poisons and those again from inflammatory actions, which is, that the latter are not governed by the laws of the former, but are simply dependent on the presence of sympathetic irritation of the nervous system, which ceases as soon as the organs which are the seat of inflammation recover. The character of the fever in all inflammations depends upon the effect produced on the nerves governing the particular organ or part affected. This can only be mentioned here, but the subject is capable of being beautifully demonstrated. Everything, therefore, which I have hitherto said of disease leads well up to the consideration of fevers themselves, generated either in the system from some peculiar congestive state, or imbibed into it by contagious elements around. These also offer the true explanation of the occult term of Predisposition ; the fuel which is stored up in the system in the most inscrutable way, requiring only the spark, or exciting cause, from aërial and other actions to set it in a blaze.

CHAPTER XIII.

FEVERS.

CONGESTIVE; OR VENOUS AND ACID.—INFLAMMATORY; OR ARTERIAL AND ALKALINE.

POISONS.

GENERATED WITHIN THE BODY, OR TAKEN INTO IT SUBSTANTIALLY OR OTHERWISE.

Fevers the opprobrium of medicine.—Gradation of disease.—Reasons why empiricism fails—Congestive or venous or acid fevers, their laws.—The germinating of blood-poisons; Nature's efforts to rid herself of them; the fluid condition of blood in acid fevers; these fevers not dangerous to life.—Inflammatory or arterial or alkaline fevers; loss of the fluid elements of the blood in; erratic localization of fevers.—The state of the tongue.—The gradation of alkaline fevers.—The muco- and sero-membranous inflammations.—This class of fever dangerous to life.—Typhoid and typhus fevers—Treatment, &c., of the two classes of fevers opposite in everything.—Quinine may be used in both kinds.—The bowels may be acted on in congestive, but not in inflammatory fevers.—Empirical treatment fails from want of philosophy.—General remarks.—Poisons—those taken into the system and those generated within it.—The natural elimination of these should be imitated by artificial or medical means.—When medicine baffles the learned, they turn round upon and condemn it.—They, not medicine, are at fault.—The true benefit of medicine must ultimately arise from scientific induction.—Charlatanism and quackery of all kinds are the worst forms of empiricism, which is now only upheld and tolerated from prejudice.

FEVERS have ever been considered the opprobrium of medicine, and no wonder; because empiricism is the opprobrium of the medical art. This may be compared to a number of links which has never formed a perfect chain, the first never having been forged; consequently, it has rather been a rope of sand than a chain of evidence for the correct treatment of disease. A broad standard of health, or the first link of attachment, never having been even hypothetically broached; men have been called upon to cure disease, or rather to restore the body to a state they know nothing of in its chemico-vital integrity. Surely, the caustic critic was right when he said, 'Men apply medicine of which they know little, to bodies of which they know less.' Philosophy always requires a basis for its reason and logic, and if this cannot be found, then one must nevertheless be assumed for a starting-point. Whether true or false, I have placed the standard of health on the chemico-vital law, that the system requires a predominance of acid elements. I have shown that the first steps to disease are not the lessening of these, but their increase, which do not interrupt functional actions, though they disturb them as this state progresses; so diseases of a higher character are developed until they cause organic derangements. I have shown their gradation, and that they are distinctive; the congestive being acid or venous actions requiring alkaline treatment; that no inflammatory actions can take place without gradation, and that when they do, the seat of disease is transferred from the venous to the arterial currents, and that this implies less acid elements in the system than it can possibly live under; therefore it is minus the chemico-vital standard of health. That in all these latter cases, the theory is not to correct alkaline actions, as acid ones are by alkalis, but to give acids to the system of which it is deficient, and so restore the balance of power and bring it again to the hypothetical standard from which we started. Now there is not the least empiricism in this, for a dozen or a hundred men being guided by these laws, would pursue a similar treatment without collusion; whereas now every one acts differently, and it is a matter of accident whether what they do be right or wrong; they believe they do right of course; but even if they do, they have no philosophy for their acts; whilst another, coming to the same end by an opposite treatment, believes he is right. To show the fallacy of these doctrines, the same means are repeated in apparently similar cases and fail, without any one knowing why, and this all admit.

With respect to fevers, they exhibit symptoms in their course similar to the combined effects of all diseases; viz., in functional disturbances, congestions and inflammations in all their varied forms; yet they are not without their own arbitrary divisional laws, which I will endeavour to illustrate according to their distinct characters.

Congestive, or Venous and Acid Fevers.

Certain super-acid or congestive conditions of the secretions will generate a fever-poison in the blood, which is mostly confined to that of the veins; this germinates, uninfluenced by any atmospheric cause, and is governed by its own laws and the elements which produced it. This may continue very regularly in the system for days together and then die away. It may do this at the end of the sixth day, and on the seventh be no more seen. If it lasts to the eighth day, it goes on to the fourteenth and ends; but if it goes into the fifteenth, it will continue to the twenty-first. This is the simple seven, fourteen, or twenty-one day fever. At another time it remits or intermits, and seems peculiar to the individual himself, for no other person about him becomes similarly affected; there is no element here either of contagion or infection. This lasts a certain time, has its governing laws, and ultimately exhausts itself, and the system becomes entirely rid of it. Another person may have similar elements, but certain restraining actions may prevent the germinating process within him, yet having them as proximate or latent causes, a fall, a fright, a too sudden change of temperature, an overheating or sudden chill, a mephitic atmosphere, in fact many circumstances may prove the *exciting* cause to rouse the germinating condition. Circumstances now arise which give character to the disease, viz., the effect of the blood-poison on the nervous system, which affects in its turn the electric integrity of the whole or part, especially as fevers from organic inflammation affect certain nerves in its immediate vicinity. Those parts which are most influenced by the blood-poison act on the nerves in their neighbourhood, and thus these two actions, which are in themselves *cause* and *effect*, regulate the peculiar features which ensue by direct and reflex actions. We have, therefore, cold shivering fits from the sudden loss of electric action, which suddenly returns and produces hot stages; these are slight attempts at inflammatory or arterial actions going off through the capillaries in the form of perspirations. As these stages have been noticed to recur at given intervals, they have been called quotidian, tertian, quartan, &c., according as they came on daily, or every second, third, or fourth day. In none of these cases are the inflammatory attempts of long continuance; they appear to be entirely congestive. A natural vomiting will frequently carry them off, as well as a sudden acid diarrhœa; evidently showing their origin to be some super-acid condition in the venous circulation. Many of the congestive disorders are attended with these kind of attempts at feverish actions, but go off if the elements which produce them are removed. They furnish, however, the germs of these fevers, and are, in fact, the predisposing causes of them. This fact is frequently seen in infants and children, who become hot and feverish, and show symptoms of some heavy disorders, when a vomit occurs, and all the heat and fever subside. The tongue in all this class of fevers is more or less furred, being regulated by the congestive condition of the system, and gets dry and moist alternately, the latter state mostly predominating. The dryness arises more from the irregular functional action of the spleen, and consequently the temporary non-supply of the natural bitter element in the bile. There is no direct muco- or sero-membranous inflammation; irregular functional disturbances of the organs seem all that are present. These fevers are of the simplest form and type that occur in the system from its direct blood-poisons, and are seldom or never dangerous when confined to proper limits and not aggravated by improper treatment or deleterious drugging. As the blood-poison, however confined to the veins, is universally distributed, so we see an ignis-fatuus-like action prevailing all over the body, every part in turn becoming the seat of some of its irritating effects. The fluid condition of the blood is not much interrupted: its solid constituents bearing a fair proportion to the serum or fluid portion. Sometimes, from the peculiar habits of the individual, some parts may be affected more than others. If, for instance, he has ever been subject to disease of any given organ, that organ, as in all other attacks of disease which he may have, will always be a peccant part. These fevers, as long as the blood-poison is confined to the venous system, are never dangerous, seldom end fatally, and with very simple treatment end favourably.

INFLAMMATORY, OR ARTERIAL AND ALKALINE FEVERS.

These are a totally different class of fevers to the last mentioned, for here the blood-poison is in the arterial circulation of the blood. This very fact implies a disturbance of functional duty in every organ, and what is the consequence? Why the body has suddenly lost the cooling influence of all its secretions; the whole glandular apparatus fails, the mucous membranes consequently sympathize, and the many many pounds of cooling fluid from these sources are now stopped. In addition to this, the fluid condition of the blood is altered; the serum is lessened, and the solid constituents are consequently larger in proportion, and thus for want of moisture there is general drought. Heat predominates, and instead of the electrical action of the body being carried on by the natural process of moist disseminating acid elements, it is confined to structural elimination alone, which is every moment exhausting the system and destroying the apparatus by a species of attrition. For want of moisture the membranes become inflamed: first the mucous membranes, as we see in scarlet-fever; then the serous, as we see in the typhoid actions. Here again we notice the erratic or ignis-fatuus-like action of the blood-poison. Sometimes the alimentary canal may become the more immediate seat of inflammation, which may occur at any given part; its usual choice is where the last appropriative parts of the digestive actions end, namely, the termination of the small intestines or ileum. This produces one train of symptoms. Again, it may occur in the next part, the large intestines, when a very different train of symptoms arise. In fact the most dangerous, for the arterial blood-poison never affects this part without the most serious head derangements ensuing; delirium being one of its symptoms. No one can tell where the greatest muco-membranous irritations will fix themselves—whether in the lungs, and cause a bronchitis; in the stomach, and cause gastric inflammation; in the lower parts of the alimentary canal, and cause enteritis or inflammation there, or whether the glandular system throughout will be the seat or seats of its insidious attacks. As long, however, as this arterial blood-poison confines itself to mucous membranes, there are discomforts enough. Simply imagine the mucous membranes not secreting, as sometimes shown by the pricking sensation, as of sand in the eyes for want of moisture; intense insatiable thirst, parched dry mouth, pricking and general heat of the skin, pains down the back and loins, fire-balls always before the eyes, which become blood-red and glazy; taste gone; a restlessness only to be seen to be pitied, and a morbid malaise predominating over the whole body, with every mental action distorted. The tongue clean, dry, and red throughout all its tracts, shows the universal disturbance, yet occasionally indicating one part as being more affected than another. Bowels confined, urine scanty and high coloured. Can imagination paint anything greater than these realities? To pretend to isolate the seat of these affections, or to say this or that part is the cause, is one of the greatest mistakes ever made. The blood-poison alone is the cause, and its fixing itself at any given part in preference to another, according to the individual condition, forms the philosophy of the case.

Let us take the next step, for we must follow the great law of gradation, and what do we find? The blood-poison attacking the serous structures! Now then we step into the domain of typhus, for whatever we saw before becomes aggravated. The electric actions of the system, carried on alone by the structural elements of the body, are getting exhausted; the natural fluids have been robbed by the consuming poison from the elements of the blood itself, from the glandular secretions, from the mucous-membranous secretions, and are now robbing those of the serous membranes, wherever situated, from the fasciæ or coverings of muscles, from the periosteum or coverings of bones, from the marrow itself, from the external coverings of all organs within the body—both of the trunk, chest, and brain—and if I say we have TYPHUS FEVER in its highest state known to us moderns, we have a combination of every form of sero-membranous disease, whether pneumonia, peritonitis, or the many diseases of the membranes of the brain itself. Happily the patient scarcely knows his sufferings; for delirium, indicating a perfect oblivion of mental appreciation, shuts him as much out from these as from the world itself. Are we then to say the brain is the seat of the disease in preference to any other organ? Certainly not; for in the gradation of this attack on the serous membranes it may stop there, as it often mercifully does.

We find given points more affected than others, and as in the muco-membranous actions, so in the serous, we have those nervous structures more immediately affected which govern them. Thus we see the nerves cannot act of themselves, but are kept in a state of integrity by the natural galvanic or electric actions of the ten thousand laboratories of the body, and return their beneficial actions in an equal ratio to assist and govern all; but, being at last uninfluenced from the loss of their governing fluids, vitality is seen just ranging on the verge of mortality; a low muttering delirium comes on, and then, sans sight, sans hearing, sans taste, sans everything, proclaim the last act,—when death drops its black curtain before the late actor on the world's great stage.

TREATMENT BY MEDICINE.—THE CONGESTIVE, VENOUS, OR ACID FEVERS.—As these are often cut short by natural vomits and acid diarrhœas, we have only to follow Nature in giving emetics (Nos. 8 and 9), alkaline remedies (Nos. 1 to 6), and aperients *if necessary* (Nos. 14, 15, 18, 19). An emetic is one of the most useful of remedies, but gone out of fashion because improperly administered. It should be given on or after a full meal, and never more so than in the congestive stages of disease. Every meal being an alkaline mass, should so become first acted on by a slight digestive process, and then the emetic brings everything out of the stomach. As a natural vomit often cuts short a congestive fever, an artificial one administered, as advised above, often does more good; for this reason,—a natural vomit never comes till digestion is nearly completed, and much deleterious matter has passed the stomach, whereas this is prevented by the plan I have advised. As soon as all vomiting has ceased, the alkaline medicines should be given, to complete the unloading of the stomach from super-acids; these will often act upon the bowels without aperients, by forming neutral salts. Should, however, aperients be necessary, after a day or two, they should be given. As long as the tongue is moist, and has a white appearance, whatever feverish action sets up, the alkaline treatment, and in fact all that I have said respecting this, is the proper plan to be adopted. It will be seen, however, in this peculiar blood-poison, that the tongue will occasionally show a dry state, especially of a morning, but subside again into a moist state, because the arterial blood is not poisoned, and consequently the functions of organs have more or less an integrity of action, as well as due secretions therefrom; still fever must be allayed on the one hand, and the often-depressed actions supported on the other. My own opinion is, that these classes of fevers are kept too low; whereas between their paroxysms, their hot and cold stages, due support and nourishment should be given; nor have I ever seen that the subsequent paroxysm, or hot stage, has been more severe, or has shown a higher range of fever by so doing; whereas I firmly believe that over-zealous starving may bring on the arterial fevers. These are not the cases for active stimulants generally; they are more benefited by such nourishing matter as will bring into action all the bodily powers themselves; a fact in the treatment of disease we should never lose sight of. Medicine may be valuable, and so it is when rightly and judiciously applied; but recollect we retain within ourselves so many remedial secretions, that we only have to make use of them to do philosophically more than we have ever done. The chemistry of the body itself, with all its wonderful laboratories, should never be lost sight of in the art of medication. Blood-letting, and local depletion by leeches, cupping, &c., are useful in these cases, as well as counter irritants. The last portion I have to mention in these diseases, is the tendency to arterial inflammation, consequently *quinine*, that remedy which empiricism has found to be so beneficial, is justly so, and I offer my philosophy for its use. It is an *alkaline*, the acting principle of the bark combined with a certain amount of *acid*: when given in pills, a certain dependence must be placed on the natural acids in the system to elicit its beneficial action: but from want of knowing the proper times for its administration in this form, and which can only be derived from a perfect understanding of glossological laws, this mode of its administration is necessarily uncertain; consequently it is most frequently given in conjunction with its proper solvent, the dilute sulphuric acid; the dose varies from one to ten grains two or three times a day (Nos. 37 to 42). The alkaloid has a specific effect upon the acid secretions and the blood-poisons eliminated from them, which have crept into the venous circulation; whilst the acid checks any tendency to inflammatory action; hence the great benefit derived from QUININE. Here we have a circumstance to which I would draw the attention of every scientific man, viz., the elective action of the system: for every salt taken for nutrition, as well as given for curative actions, has one of its properties made use of to assist this great end.

Care must be taken in these fevers not to act too much on the bowels, though here it may be occasionally useful; but if natural secretions go on effectively, natural excretions will follow as a matter of course. If the urine is very thick and turbid, there are morbid elements present in the blood: if it is high coloured and scanty, there is inflammatory actions somewhere, however low that condition may be; if the urine is clear and natural, there is no inflammatory action present. These form unexceptionable rules.

INFLAMMATORY, OR ARTERIAL AND ALKALINE FEVERS.

Equally opposite as these are to the congestive fevers, so must be their treatment. All the acids and opiates are here imperatively called for, and according as the effect of the arterial blood-poison is acting on the system, so must be their use. The sulphuric, muriatic, nitric, and nitrous acids, singly or combined, according to circumstances, must be given, but never except combined with narcotics and opiates. I have found them also best combined with syrups, for this reason, that they are then pleasantly sour, rather than acid; and I am of opinion that the sugar assists in forming an acetous ferment, even with the little gastric acid we find in this disease. Blood-letting, both general and local, must be avoided. If it is useful, and even necessary in the congestive fevers, it must be more or less hurtful in these their opposites. Recollect blood elements are scarce for secreting actions; why then take them away? Nature has but few eruptions in the purely arterial fevers: ergo, why use counter irritants? If she refuses to do so, they are unnecessary. Nature, however, requires support, because she is losing electric power from the want of functional secretions: stimulants now offer their aid, and who that has seen these fevers, has not seen the rapid decline of the pulse from the effect of a glass or two of port wine? What is this but supplying elements to the galvanic batteries of the system, to diminish those which are wasting them? If this is required in muco-membranous inflammation, when the system is very low, how much more so is it when the serous membranes are attacked, and there are typhoid actions! Use, therefore, judgment and discretion. If we see that secreting actions are unperformed in the system, by reason of the arterial inflammation burning up the fluids, and that it is a work of supererogation to give any form of diet, because it cannot either be digested or assimilated, the result is, Nature locks up the bowels, because she depends on them for her vital forces, her very means of life, in fact her existence. Follow her wise instructions, if it is possible to fly in the face of all usage and authority, which so much defies her. I am not speaking as a theorist; there is nothing I have hitherto written that has not had practical observation for its basis; therefore I address all schoolmen, that in following the laws I have unhesitatingly proclaimed, I tell them that they often kill with the best intention in the world to save, by opening the bowels in arterial fevers. All have seen even the difficulty they have had in doing this; how the common purges, the drastic purges, the enemata have all failed, and yet they will not learn; but when their unwise and injurious practices have succeeded, delirium has followed them, and death that delirium, and yet they still persist in trying to open the bowels which Nature has locked up for specific ends.

In arterial inflammation and fevers, whether of brain or viscera, *the sheet-anchor is to let the bowels rest.* I have kept them confined ten and twenty days and more, with the most perfect success, or death would else have followed; nay, very often five-and-twenty days. When a crisis has shown itself, the gentlest aperient has brought away a consistent, soft solid motion, as healthy in character as if it had been the daily evacuation of the healthiest individual. Acting thus judiciously, all may see the same good result. Let the frontal headache alone be the guide when to act on the bowels with safety. Empiricism is like a good cow, that yields its pailful of milk, and then kicks it over; so it is with respect to opening the bowels; the treatment of arterial fevers may be correct in all but that, and there it fails.

TREATMENT BY HYGIENE.—This requires but few remarks. The CONGESTIVE FEVERS should be supported as all other congestive disorders, by that class of diet which makes the least acid after being digested, such as the roast meats, &c.; while all the boiled meats, mutton and veal broths, milk, port wine, &c., are to be strictly avoided. On the other hand, in ARTERIAL OR ALKALINE FEVERS, these are the very agents that are to be used in conjunction with the acid medicines, because they make acidities in their last act of digestion. With respect to temperature, apartments, ventilation, &c., these are pretty well understood, with this reservation,—that in the congestive actions, cooler air can be borne, because the air-tubes of the lungs have protecting coverings; whilst in denuded mucous membranes they have none: therefore caution must be used, or irritative actions are kept up.

These then are the progressive steps of disease; we cannot do violence to our reason by denying them, though we may but imperfectly understand them. I have endeavoured to show how far the ladder may be mounted, and the descent made easy, both in trifling heights as well as in the perilous altitudes of disease. In one stage, correction and removal of that which causes disease are the steps to be taken, always with a view to get the system into that state denominated health, governed, as I have said, by a predominance of acid in the system; in the other, to bring it to that state by the addition of those elements of which it is deficient, making use of the chemistry of the body itself to aid and assist the operation.

PREDISPOSITION to disease must always be understood to imply a state of body possessing certain morbid elements, awaiting only certain exciting causes to produce maladies which may at first be mild in their character, but yet may take the highest range; but when once produced may be removed or aggravated by natural or artificial causes or acts. These being facts, the laws and rules I have laid down cannot be better illustrated and proved than by the chemical and empirical effects and treatment of POISONS, both direct as well as indirect, of all descriptions, which I will now state in a few words.

POISONS.

Persons may eat poisonous herbs and other matters by mistake, or be inoculated directly with matter infectious to the blood, as by the bite of venomous animals or reptiles; or inhale mephitic or malarious gases from drains, cesspools, marshes, holds of ships, &c., or the emanations of diseased individuals. They may also take direct acid or alkaline poisons, or substances of a non-chemical character, which arrest the functions of the body; or salts which combine the acid and alkaline elements in such doses as act as poisons in the system. There is scarcely one of these modes of poisoning that has not its prototype in the self-generated poison produced by the morbid secretions in the body itself. The highest intelligence in the profession has been brought to bear on the treatment of the direct poisons. The toxicologists, the chemists, and chemical physicians have all laboured in this great field, and brought science to bear upon these manifold subjects. They give emetics to rid the stomach of an offending mass; alkalis to correct a direct acid poison, known to have been taken; acids to reduce alkaline actions; and where the well-balanced acid or alkaline properties of the poison taken is known, their object is still to neutralize and dissolve them. So careful are they in this, that they endeavour to set one element free because it is harmless, and reduce the other to a chemical compound to render it inert; so that at one time the alkali is rendered inert by being set free, and the acid converted into another substance, and at another, the acid is set free, and the alkaline rendered inert. Yet marvellous as it may appear, they shrink from the same idea in reference to the bodily poisons. The alkalis given in disease are only partially admitted to have a neutralizing effect on any poisonous acids generated in the body; and if acids are given, it is not permitted to say they are to correct an alkali, or to give to the system that of which it is deficient; but are regarded as tonic remedies, the theory of which is vague and undefined. As regards also the effects of the neutral salts on the body, the doctrine of ELECTIVE action of their elements in a general way is not admitted; but which, nevertheless, is one of its greatest chemical principles.

Lastly, that medicine through these very agencies depress and induce the ELECTRIC actions, which are the great moving springs for all the vital ones, is not yet admitted to possess these important powers in any defined manner. Thus on the one hand, while all desire to be called scientific chemical physicians, on the other, they ignore the ægis of their doctrines, and will not submit to be accused of overstepping any defined propriety of practice, or generally admitted dogmas, seeming as careful as judges on the bench of making any new precedent. Particular in their prescriptions, lest they contain any unchemical combinations, yet shutting their eyes to the unruly uses the great laboratories of the body make of their scientific compounds as soon as they are swallowed. All these things so hedge about the practice of medicine, that a plain matter-of-fact person gets thoroughly bewildered; and thus it is that the great body of medical men, knowing nothing but what they have been taught, presume that all which the pilots of their CRAFT have laid down in their charts is true, even if never understood, fathomed, or capable of being explained. Alas! what is the uncertainty of life, of man, of events, of law, or anything else, compared to the uncertainty of physic as practised up to the present time! It is a fact that some of our most eminent medical men, who after years of devotion to the high art of medicine, finding themselves baffled, and seeing how frequently, when drugging has ceased, the patient has got well, they have been led to condemn medicine altogether. This is no argument against the proper use of medicine, only against their own imperfect knowledge and application of it, and this shows that they have never understood it. Men of this character do the greatest injury to science, their fellow-labourers, and themselves. No man has any right to condemn the remedial application of medicine on any such bases; disease is not wrong; drugs are not wrong; it is they who are wrong who give a wrong drug in any disease, and no sanction of authority or usage can make it right. It is this very thing that makes empiricism the atheism of medicine; all that is correctly done now is by a mere matter of accident. It is very evident that they who condemn medicine know nothing of the certainty of its application.

It seems a curious fact to trace the remedies given for poisons taken directly into the system, and to compare them with similar ones which the system itself generates, and then to find a dissimilar practice pursued in the one case to what is done in the other, when by all the laws that chemistry has defined they should be the same. We cannot shut our eyes against the causes and effects of the one if they resemble the other. If similarity in any of these matters can be traced, we must admit that a man may be poisoned as much by his own morbid chemical secretions as he would be by taking a similar poison direct into his system. In the natural malignant diseases we often see many of the aggravated actions of specific poisons, then why should we have a different philosophy for the one than we have for the other; inasmuch as we use the same means for the remedial action of both when we act correctly?

It has been impossible for me in this small volume to specify every form of disease; I have therefore confined myself to the more prominent ones, in order to show a great principle, a great governing law in the treatment of disease, whatever it may be. The great variety of disease will always make the physician an important member of the community. My object is to direct him into a safer path than he has ever pursued, and to give some idea to the community in general of the FACTS obtained in the great economy of Nature, and to show that every meal that is taken is an alkaline mass, designed for a wise purpose as FOOD as well as PHYSIC; and that this is so acted on by the chemical laboratories of the body as to yield certain results, of which we can only judge on the broadest possible scale. But as these laboratories are evidently at fault on many occasions, and secretions get out of order, then to show that such PHYSIC should be given to assist them and remove from the system all such elements as war against or are detrimental to it, or add to it those in which it may be temporarily deficient. Thus carrying out the very nature and title of the work itself; showing not only trains of causes, but that in relation to the FACTS of the existence of the elementary structure of the body; other FACTS of their being in a state producing disease, are shown by the discriminating use of FOOD and PHYSIC, that they may be so neutralized as to bring about a state of health without injuring the system. Neither Food nor Physic were ever designed to poison the body, yet in many instances with the very best intentions, owing to the ignorance of man, both these often do so. The wrong administration of medicine will often aggravate a simple disease, and produce that which would never have happened if left alone; while thousands of instances occur in which a wrong medicine may have done good, simply by altering the chemical elements in the body. Empiricism may boast in thus effecting a cure, though it can say nothing for its philosophy, because at another time the very self-same process *kills*. It is very evident to me that many peculiar conditions of organs occur in this way, and diseases become complicated; so likewise with the application of Food. The best treatment by medicine may have accidentally been given; but to show that there is no philosophy in the hand-in-hand treatment of Food and Physic, diet improperly administered at the same time has been equally destructive to life. A perfect knowledge of Glossology will set all these matters in a clearer light than they have ever appeared. Again, there are many doubtful cases which come before the physician, truly named, like his art, *occult*. So that there is often small blame to anybody who can neither find them out nor cure them. Still the discriminating appearances of the tongue will here render great assistance, and if followed, fewer errors will be laid to our door, and this will be a great gain both to the profession and the community. If benefit is ultimately to accrue, it must come through science, for it is totally impossible that charlatanism and quackery can compete with it when it has reduced all its great principles and discoveries to something like law. It is far off that now; as the very elements that compose the scientific mind are opposed to any great revolutionizing principles, so warped are they by authority and received opinion. It seems even that heresy made fashionable is more likely to be clutched at than a stricter inquiry into the orthodoxy of medicine. There is no man of experience, observation, and judgment in the orthodox profession, but has seen that medicine is often not required, and who has prescribed accordingly without associating himself with the vagaries of homœopaths. I would be a homœopath to-morrow if a philosophy were given me for following this doctrine more potential than this sect at present provides for their disciples. This fact is constantly shown, that there is not so much real disease in the system as has been supposed, Nature having the power to overcome the disposition to it if let alone. Homœopathy thrives not on its principles of action. but on the facts of doing so little and not injuring the system in all the smaller ailments, while it fails in actual energy when that is necessary; whilst allopathy, founded on a gross empiricism, believes disease to be a natural inheritance of man and a law of the body, and not its exception, and that Nature is a nonentity in the affair, and so makes small ailments worse by a most pernicious use of drugging. The community therefore benefit by leaving their small ailments to Nature, or even under the belief of taking globules for their cure, against being made worse by having them aggravated by drugs. But that science will one day assert its true right to take the first place in the scale I have no doubt whatever. This, however, must be made by a great effort to get away from the prejudices of the age in which we live, and those dogmas which are now cherished and believed in. There is already enough recorded, and to spare, in all that relates to the sufferings of poor humanity, but how much of it has been brought on by drugs themselves I dare not say. The true practice of medicine has yet to be written, and all those works on this subject which now cumber the shelves of the medical booksellers, will ultimately be valueless in all that relates to the empiricism of drugging, because they are wrong in principle. However much we may respect the great toilers, labourers, and hodmen of science, it must be admitted by the very fact of the works that are written on the same subject being so adverse, that truth has not yet declared itself; and when we see the teachings and practice now going on at our hospitals, it is quite sufficient to convince any discerning mind that there is not an atom of stability or foundation in anything relating to the administration of drugs; but that it is a quicksand, ever changing and ever engulfing human intelligence. Where it does not do this, it only shows the little genius for observation there is, and how difficult it is to shake off prejudice and bigotry.

CHAPTER XIV.

THE SCIENCE OF PRESCRIBING MEDICINE.

The really curative medicines are few in number.—Arrangement of drugs into separate divisions: their actions and their combinations.—Prescriptions; their definite uses explained.—Diseases cured by the antagonism of the elements which produce them.—False theories, &c.

The direct curative medicines are few in comparison to the number used. The former are pre-eminently simple in all their actions, and when properly given assist Nature; whilst the administration of what may be called the speculative class of remedies, constitute as much a fashion as any other usage of society. Popular remedies, supposed to suit everybody and everything, have their day, and then give place to others. This is the result of all I have been endeavouring to point out, namely, that there is at present nothing fixed or certain in medicine. Whatever antics we may play with the external parts of our bodies, we have no right to do the same to the inner on mere speculation, often to the aggravation of disease or shortening of life. Whatever form disease takes in the human economy, the chemical elements therein must restore it to a healthy condition. Medicine correctly administered assists these natural acts; when otherwise, it fails, because it is presumed to have an independent action, which never can be.

I have shown that the elements of the living body are incessantly at work in ten thousand laboratories, constantly producing acid, alkaline, and neutral actions; therefore to administer medicine safely and efficaciously, the general state of the system as regards these more prominent conditions must always be first considered. Whatever form of medicine is given, it must be of an acid, alkaline, or neutral, that is, non-chemical character in its action on the bodily secretions; its design being to correct by a species of antagonism the cause producing disease. The same thing must be done with diet; for if medicines be administered which add to the evil which is the cause of disease, or if diet be given which assists the elements which produce it, disease will be aggravated instead of being cured. All the vital phenomena are performed by antagonism of the direct and indirect chemical actions; which produce heat or lessen it, create bulk or decrease it, assist power or weaken it, excite nervous action or depress it. The greatest effects produced are the electrical actions; positive and negative currents being constantly passed under the name of direct and reflex actions, and in the living system the one never occurs without the other. As the nervous or electric telegraph of the body is that whereby everything is appreciated and understood, it is necessary that it should always be in a state of integrity. As it is also the great agent of keeping up the permanent and equable heat of the system, it is a working power always to be held in view. In many states of the system, where there is a deficiency of electric action, and consequently of motive heat in the system, such power may be beneficially applied by every scientific means, from Pulvermacher's chains to the higher electric and galvanic currents from more powerful batteries. Modern science may truly consider these mechanical aids more deeply, for I know none more simple and efficacious where there is loss of power.

The direct electrical actions of medicine and diet deserve more attention than are accorded to them. The gastric acids being dormant during fasting, secrete largely when a meal is taken, which, being always an alkaline mass, is acted on most vigorously, and causes an evolution of heat by union of opposite elements, stimulating every laboratory of the body, and is consequently a primitive electric power. Let the acid of the stomach be in excess over the food taken, the first effect is shown in many forms of dyspepsia, heartburn, eructations, flatulence, &c., &c. Let this be neutralized to its proper standard by a simple dose of carbonate of soda, we find an electric battery set in motion equal to the effect of one of our largest galvanic troughs, whose power is produced by the action of acid on zinc plates. But here we have a beneficial effect produced of extraordinary character. The first cause of evil in the great consecutive law of disease, excess of acid over its natural predominance, is removed by a very simple process; whilst the heat produced serves the purpose of aiding vital phenomena, precisely as the simple meal acts in the perfectly healthy system. This, then, is the first step in the art of prescribing medicine; it is simple and efficacious, reducing a congestive or super-acid condition of the system to a normal standard, which, without such correction, would be the nucleus of all the primary diseases. It is the great duty of Nature to correct these herself, and this she is always doing; a fact that makes health the rule, and disease the exception. The high electrical heat of the body in inflammation and fevers, is owing to the absorption or neutralization of the acid blood-elements by its alkalis, and the absence of the cooling influence of the seas and rivers of acid secretions. Here, then, all the vital elements are deficient. What is the medical element we have now to depend upon? surely not the alkali, for this is already in excess. The acids must now be used, because they are deficient elements in the body. The application of the direct acids in these cases is not only gratefully acknowledged by the patient, but the effect is seen; it is appreciable by its relieving the very machinery of the body from the attrition which is wearing it out. What is a dose of port wine in such cases as a dietetic remedy but giving the system that which it converts into an acid element, and so in a temporary degree relieves the system from robbing itself of elements of life? The one is a direct, the other an indirect remedy.

The neutral or non-chemical medicines are those which stimulate the mechanical powers of the system; accelerate the actions of the intestines and produce purging, or irritate the stomach and cause it to reverse its tendency to collapse upon itself and its contents, and so keep the cavity expanded; the result being vomiting through an inverted funnel: this is the action of the emetics.

The compound medicines, such as the various salts, composed of acid and alkaline elements, are often used most indiscriminately and injuriously, because the state of the system is not clearly understood at the time of their being administered. If the acids are given when alkalis alone should be administered, or alkalis when acids should be given, or the mercurials and the compound drugs, to the perfect ignoring of the elective powers of the system; or lastly purging be induced when the system should be made to husband all its vitalizing gases, then evils must arise and disease be aggravated.

This practice cannot be called scientific; it is rather the *art and mystery of medicine* taught on the loosest principles by colleges and schools, and duly set forth in their diplomas as having been attained by those to whom they are granted.

What the scientific medical world wants is some fundamental law for the correct administration of medicine, in opposition to the speculation and uncertainty which now surround it. What the public want is to be rescued from the clutches of charlatanism and quackery, and a feeling of greater security in the arms of science.

The following classification of drugs, and their combinations in prescriptions, will serve many useful ends, both in simple and what may be called complicated cases: their uses being defined according to the general condition of the elements of the system, which in their want of integrity, produce temporary derangements therein. Let it be further understood, that there should be no *mystery* in medicine or medical men, but that disease can be better cured by few than by many drugs; by little, rather than by much medication.

ALKALIS AND ALKALOIDS.

Carbonate of ammonia.
———— magnesia.
———— potass.
———— soda.
Dinneford's solution of magnesia.
Common prepared chalk.
Sal volatile.
Dover's powder.

The infusions of bark:—
Cinchona.
Gentian.
Calumba, &c.

N.B.—All fresh infusions, whether of tea, coffee, or herbs of any kind, either fresh or dried, are alkaloids.

ACIDS.

Acetic.
Citric, or lime juice.
Muriatic.
Nitric.
Nitrous.

Phosphoric.
Prussic.
Sulphuric.
Tartaric.

THE SALTS, OR MIXED ALKALINE AND ACID ELEMENTS.

All the Acetates
Citrates
Muriates
Nitrates
Phosphates
Sulphates
Tartrates, &c.

of

Ammonia.
Antimony.
Iron.
Magnesia.
Mercury.
Opium.
Potass.
Quinine.
Soda, &c.

Thus Epsom salts, or sulphate of magnesia; common salt, or muriate of soda; chloric, nitric, and sulphuric ether, and the syrups come under this head.

NEUTRAL MEDICINES, HAVING NO CHEMICAL ACTIONS; BUT ARE STIMULATING, SEDATIVE, OR MECHANICAL, ACCORDING TO THEIR CHARACTERS.

THE TINCTURES.

Balsam of Tolu.
Calumba.
Digitalis.
Gentian.
Henbane.
Laudanum.
Paregoric.

WINES.

Colchicum.
Ipecacuanha.
Spirits of wine.

OILS.

Castor oil.
Cod-liver oil.
Sweet oil, &c.

POWDERS.

Compound tragacanth.
Ipecacuanha.
Jalap.
Opium.
Rhubarb.
Scammony.

EXTRACTS.

Compound Colocynth.
Rhubarb.
Gentian.
Henbane, &c.

GUMS.

Tragacanth.
Arabic.
Galbanum.
Camphor, &c.

The actions of medicines may be thus generalized. The pure alkalis and acids act directly on the system, the one by correction of acids, the other by adding to it elements of which it is deficient. The mixed chemicals or salts having these two elements in combination are used by the system according to its chemical discretion or election, by its taking therefrom any alkaline property it may require and rejecting the acid; or taking the acid and rejecting the alkaline. The greatest care should therefore be used in their administration; for when an alkaline may be alone necessary, the acid may aggravate disease; and where an acid is alone called for, the alkali may do the same. I have included the syrups in this catalogue, for this reason, that all saccharine matter produces acetous fermentation by heat; therefore, in the acid disorders, syrups should be omitted from the alkaline prescriptions; while in fevers and inflammations they may be given largely to assist the acids.

The neutral preparations, having no direct chemical action of themselves, must nevertheless be broadly considered, as influencing by their known mechanical or stimulating actions the chemical laboratories of the body, and so do an actual benefit or injury as the case may be. If we look at all these matters in a simple light, and consider that whatever the disease may be which comes under treatment, the chemical condition of the secretions of the body generally must be the first thing attended to. The tongue alone can correctly point this out and indicate, without any wide diversion, the proper medicine to be used.

The union or combination of drugs should be always in accord with the necessities of the case. Thus, for instance, in congestive or acid actions, elements are evidently to be neutralized which are in excess, or to be removed by direct processes. Nature does this by spontaneous vomiting, sweatings, purges, acid diarrhœas, profuse expectorations, mucous fluxes, or spontaneous disruption of small congeries of congested vessels; as bleedings at the nose, or vomitings of blood from the stomach or lungs. She relieves by counter irritants, or skin eruptions; and all disease of specific organs may be considered her effort to cure, by causing any particular one to take the onus, or gravitated mass of morbid elementary matter, from all the rest. What, then, should science do? In the first instance relieve by vomits, correct surplus acidities, produce perspirations, excite expectoration. The medicines accomplishing these ends will often form in the system or alimentary tract such compounds as will excite laxative actions; and when not sufficiently so, mild aperients may be given. In all these actions the upper works, or those most engaged in the primary processes of digestion, are mostly out of order. Where, then, is the wisdom of flying to aperient medicine on all occasions to act upon the large intestines, when the stomach is alone at fault? Again, most of these derangements are attributed to the liver, consequently medicines known to have great influences on glands, but which act in the most roundabout way imaginable, are given; such as the mercurials, to act on the secondary parts of the digestive process, thus ignoring the evil produced in the stomach alone. The elements known under the name of *chyle* should be the least interfered with of any in the body, as they are so highly chemicalized that, in passing through the appropriatory apparatus, they are separated simply by the absorbent vessels taking their nourishing matter, leaving their non-nourishing elements to fall into the common sink. What is the consequence? Why, that the real seat and causes of disease are passed over; the body is rendered deficient of the new elements of the food by their being carried off by aperients; the large intestines are stimulated to discharge their manure before elementary gases can be formed, and so the bodily powers are all weakened; because all mankind, more particularly the English, have been taught, and implicitly believe, that they are all BILIOUS. Never was any serious farce or tragic comedy so completely played out as this. Whenever patients are told they have sluggish livers and are bilious, depend on it that in ninety cases out of every hundred nothing is known of their disease. Whenever the public tell me the same story of themselves, as ninety per cent. do, I can only inwardly exclaim, 'God help you; but you get no blue-pill or calomel from me.'

If the actions which Nature pursues in her wisdom be attended to, we must so combine the elements of drugs as to give the best chance of neutralizing the elements of disease; or such as will act upon the skin, the kidneys, the lungs, and mucous membranes generally to stimulate, and at the same time correct and assist, the chemical laboratories of the body itself. This may be justly called preventive medicine, and will save many serious disorders; for depend on it we should never see or hear of half the curious cases we do from natural actions alone. Our own false system of drugging, which complicates everything, produces the bulk of these.

All the first stages of disease will often yield to the following simple combinations of medicines:—

Carbonate of soda gr. xv (15 grains).
Water . . . ℥iss (1½ ounce, or three table-spoonfuls).

Should the system require a little stimulus, then add—

Sal-volatile ♏xv (15 drops).

If the skin and kidneys need a slight action as well, add—

Sweet spirits of nitre, ♏xv (15 drops).

In the presence of uneasy pain in the bowels, then add—

Tincture of henbane ♏xx (20 drops).

Should the nerves be at all excited, then add—

Spirits of camphor ♏v (5 drops).

If rheumatic pains are flying about, add—

Colchicum wine ♏xv (15 drops).

In the absence of regular appetite, substitute for the water

Infusion of gentian or calumba ℥iss (1½ ounce).

And if a slight thirst be present, add—

Tincture of gentian or calumba ♏xx (20 drops).

Lastly, in case of the tongue being much furred, add—

Antimonial wine ♏xx (20 drops).

Thus it will be seen how readily a few agents properly combined, having different actions, can be made to act together in arresting and neutralizing the effects of any indigestible matter taken into the stomach, causing dyspepsia, nausea, sleepiness, headache at the back part, stitches in the side, flatulence, spasms and colicky pains, acid eructations, giddiness, hiccoughs, and fulness of the bowels, often producing costiveness in the most regular habits. All the above remedies it will be perceived may be combined in one mixture, though some, nevertheless, may be withheld according to circumstances, and others substituted; nay, all may be taken separately (except the colchicum, which I never advise) in the doses specified against them; always diluting them with water.

A few prescriptions based on these views, and given by way of illustration, will be found useful as ordinary medicines.

1. Take—

Carbonate of soda	ʒii	2 drachms.
Sal-volatile	ʒi	1 drachm.
Water	℥vi	6 ounces.

Mix. Take a fourth part twice or thrice a day after meals.

2. Take—

Carbonate of soda	ʒii	2 drachms.
Sal-volatile	ʒi	1 drachm.
Sweet spirits of nitre	ʒi	1 ,,
Water	℥vi	6 ounces.

Mix. Take two table-spoonfuls every three hours.

3. Take—

Carbonate of soda	ʒii v. ʒiii	2 or 3 drachms.
Antimonial wine	ʒii	2 drachms.
Sweet spirits of nitre	ʒi	1 drachm.
Sal-volatile	ʒi	1 ,,
Water	℥vss	5½ ounces.

Mix. Take a fourth part every four hours, or an hour after every meal. If the tongue is much coated or furred.

4. Take—

Carbonate of soda	ʒiii	3 drachms.
Antimonial wine	ʒi	1 drachm.
Sweet spirits of nitre	ʒi	1 ,,
Sal-volatile	ʒi	1 ,,
Tincture of henbane	ʒii	2 drachms.
Water	℥v	5 ounces.

Mix. Take two table-spoonfuls three times a day.

5. Take—

Carbonate of soda	ʒii	2 drachms.
Sal-volatile	ʒi	1 drachm.
Sweet spirits of nitre	ʒi	1 ,,
Tincture of henbane	ʒii	2 drachms.
Water	℥vss	5½ ounces.

Mix. Take two table-spoonfuls every four hours.

6. Take—

Carbonate of soda	ʒi	1 drachm.
Sal-volatile	ʒi	1 ,,
Sweet spirits of nitre	ʒi	1 ,,
Tincture of henbane	ʒii	2 drachms.
Spirits of camphor	ʒss	½ drachm.
Water	℥vss	5½ ounces.

Mix. Take three table-spoonfuls three times a day.

7. Take—

Carbonate of soda	ʒii	2 drachms.
Sal-volatile	ʒi	1 drachm.
Sweet spirits of nitre	ʒi	1 ,,
Tincture of henbane	ʒiii	3 drachms.
Spirits of camphor	ʒss	½ drachm.
Colchicum wine	ʒiii	3 drachms.
Water	℥v	5 ounces.

Mix. Take a fourth part three times a day. For rheumatism in the upper parts of the body.

The tinctures of calumba and gentian, ʒii (2 drachms), may be added to any of the above prescriptions, or their infusions substituted for the water.

Where the powers are strong and a full habit of body prevails, and when the fur of the tongue is dark or yellow, indicating a very foul state of the stomach and actual presence of bile therein, *where bile should never be*, but when present always nauseates,—then Nature will often relieve herself by spontaneous vomiting. Now this almost always happens when the stomach is empty; because each meal, as an alkaline mass, takes some of the offensive secretions away; and consequently when sickness supervenes, it is at a time when the self-generated and accumulated poisons alone are present. The action of vomiting is therefore attended with great distress, and often fruitless efforts to expel these poisons; after a time it is deferred and kept in abeyance by another meal, which, however insignificant, may neutralize portions of those poisons and carry them out of the stomach, while others are taken up by the absorbent vessels and carried into the blood.

These states are always to be feared and carefully guarded against; because they produce the blood-poisons of fevers and inflammations, whether general or local,—and which of the two no man can say:—for if general, the fever may be congestive or venous,—inflammatory or arterial,—capillary or terminating in eruptive fever; and if on the other hand it be local, this depends on so many circumstances—that no one can say which organ will first become the seat of inflammation. Now, if Nature always tries to eject as speedily as possible all actually foreign poisons taken into the stomach, she equally endeavours to do the same with those that are self-generated; and if she is unable to accomplish it herself, we must aid her with an emetic, which should always be given after a full meal if possible. Emetics, the most beneficial of medical agents (especially for children), have gone out of fashion; because they have been improperly given on empty stomachs, to the great distress of the patients, and failure of purpose in consequence. When they are necessary, the above advice should be attended to as closely as possible.

8. Take—

Ipecacuanha powder	grs. xv ad xx	15 to 20 grains.
Antimonial wine	ʒii	2 drachms.
Water	℥i ad iss	1 to 1½ ounces.

Mix. To make an emetic.

9. Or—

Antimonial wine, ʒiii ad ʒvi (3 to 6 drachms), water, ditto.

After the first vomit the patient should drink warm water. Vomiting will seldom occur more than three times,—the first expels the more solid contents of the stomach,—the second gets rid of the less solid and more acrid matters or poisons,—and the third produces great action on the liver and the second or chemical stomach. The liver freely disgorges its bile,—which passes rapidly through the small intestines and then through the large,—producing hot fluid motions.

Now, these are precisely the actions which do the great good in the first stages of fever; because fever is about to be set up, from a self-generated poison in the alimentary canal, suddenly removed therefrom and carried into the blood. Hence if judgment be used, and an emetic given to remove those elements which are unabsorbed, it is correct philosophy to say that emetics tend to cut fevers short; and it will be seen how closely these artificial actions resemble those which I proved to exist, when comparing the poisons actually taken in bulk with those that are self-generated. Almost all fevers, therefore, may thus be checked if emetics are used in time; except scarlet-fever,—for reasons previously explained.

We have thus far considered the forms of alkaline medicines for direct acid or congestive actions of the system, including also that stage of them where thirst indicates a slight feverish tendency requiring the addition of the bitters, such as gentian, &c., to correct and arrest it; as well also as to give the system a certain tonicity that may prevent the regular setting in of fevers. Then again, we have medicines of a simple alkaline character—such as Nos. 5 and 6—for nervous disorders, nervous depression, &c.; and lastly emetics. Few and simple as these prescriptions are, they relieve and prevent many forms of dyspepsia or indigestion; check an immense amount of the elements of disease; act upon the exhaling and absorbent systems, and produce perspiration: remove the pains of flatulence, by causing absorption of the free gases in the bowels; assist the chemical laboratories of the body to render inert the deeper-seated morbid elements collecting within glands and about other important organs; and, finally, neutralize elements already in the blood, which ultimately lead to functional disturbances of the secreting organs, through the arteries which supply them; or in the veins, which would otherwise show themselves in many forms of eruptive disease. Thus is disease checked in its bud; not only so, but I have seen many hundred cases which have gone the round of the profession, and treated with all the new and fashionable chemical elements of the day, with all the different forms of fashionable dieting to boot, yield to these simple processes of correcting primary morbid elements in the system, and the patients allowed to live on those varieties of diet which as omnivorous feeders they ought to take, and which in the inscrutable machinery of the body yield elements of a healthful character and tendency.

It next becomes necessary to take another view of those actions and conditions of the body that produce congestive states of the lungs attended by coughs. In all these cases the tongue is an important counsellor. If in the presence of a cough, that organ be white and furred—especially at the root and down the centre—and there be much expectoration, it denotes a congestive state of the windpipe and bronchial tubes, which are loaded with mucus, the irritation from which causes the cough. If free expectoration follows this, the air-passages are relieved—if not, that action should be encouraged by giving stimulating expectorants, and such medicines as will loosen and dissolve the phlegm so collected—causing it to be all the more easily dislodged and got rid of when the cough comes on. For the bronchial congestions, the following prescriptions will be found beneficial:—

10. Take—

Compound tragacanth powder	ʒii	2 drachms.
Nitrate of potass (nitre)	℈i	1 scruple.
Sweet spirits of nitre	ʒi	1 drachm.
Antimonial wine	ʒi	1 ,,
Tincture of balsam of tolu	♏xv	15 drops.
Simple syrup	ʒii	2 drachms.
Water	℥vss	5½ ounces.

Mix. Take a dessert-spoonful frequently, or when the cough is troublesome.

11. Take—

Compound tragacanth powder	ʒiss	1½ drachms.
Sweet spirits of nitre	ʒi	1 drachm.
Antimonial wine	ʒi	1 ,,
Tincture of balsam of tolu	♏xx	20 drops.
Simple syrup	ʒiii	3 drachms.
Water	℥vss	5½ ounces.

Mix. Take one table-spoonful every one or two hours.

12. Take—

Compound tragacanth powder	ʒi	1 drachm.
Nitrate of potass	℈i	1 scruple.
Sweet spirits of nitre	ʒi	1 drachm.
Tincture of balsam of tolu	♏xx	20 drops.
Simple syrup	ʒii	2 drachms.
Water	℥vss	5½ ounces.

Mix. Take one table-spoonful every two or three hours.

13. Take—

Nitrate of potass	ʒi	1 drachm.
Sweet spirits of nitre	ʒi	1 ,,
Antimonial wine	ʒi	1 ,,
Tincture of balsam of tolu	♏xx	20 drops.
Simple syrup	ʒii	2 drachms.
Water	℥vss	5½ ounces.

Mix. Take one table-spoonful every one or two hours.

Congestive actions of the lungs are seldom unaccompanied by some similar disturbance of the stomach; for these, one or other of the mixtures, from No. 1 to 3, may be taken once or twice a day, at the same time that the mixtures are taken for the cough;—because carbonate of soda will disengage much carbonic-acid gas from the lungs as well as the stomach. For the asthmatic coughs of old people, who have always more or less irregularity of action in the kidneys, with certain dropsical tendencies incidental to general functional debility, No. 13 will be found very serviceable, and to answer several useful ends. The nitrate of potass (or nitre) in the mixture may be increased in quantity, as the case requires.

In the congestive actions of either the stomach or lungs, I have shown how pernicious a practice it is to begin dosing the system first with aperient medicines; or believing the liver to be the chief cause of all the evil, and taking blue-pill or calomel, to the great aggravation of disease. If an aperient is required after a few doses of alkaline medicine, I recommend the following pills as fitting for all ordinary occasions:—

14. Take—

Extract of colocynth	℈ii	2 scruples.
Extract of rhubarb	℈ss	½ scruple.
Powdered scammony	℈ss	½ ,,

To be made into a mass, and divided into twelve pills; of which two or three may be taken at bedtime occasionally.

15. Take—

Extract of colocynth	℈i	1 scruple.
Extract of rhubarb	℈i	1 ,,
Extract of henbane	℈ss	½ ,,

To be made into a mass, and divided into twelve pills; of which two or three may be taken at bedtime occasionally.

These pills act without distressing or griping the bowels, or interfering with the usual routine of persons constitutionally accustomed to regular action. Those who suffer from hæmorrhoids or piles should take neither of the above forms of aperients, nor even castor oil nor figs; for these often produce piles. The following mixtures will be found useful to this class of sufferers :—

16. Take—

Epsom salts	℥ii	2 ounces.
Boiling water	℥viii	8 ,,

Mix; and when the solution is cold, add—

Dilute sulphuric acid	ʒi	1 drachm.
Paregoric elixir	ʒiii	3 drachms.
Syrup of red poppies	ʒiv	4 ,,

Mix. Take a wine-glassful night and morning till a gentle action ensues, and then discontinue.

17. Take—

Epsom salts	℥ii	2 ounces.
Boiling water	℥v	5 ,,

Dissolve; and when cold, add—

Dilute sulphuric acid	ʒi	1 drachm.
Paregoric elixir	ʒii	2 drachms.
Tincture of gentian	ʒii	2 ,,
Syrup of red poppies	ʒiii	3 ,,

Mix. Take two table-spoonfuls three times a day.

For inflammatory rheumatism of the lower extremities, add colchicum wine, ʒii (2 drachms), to either of the above mixtures, Nos. 16 and 17, and take them as they are directed until relief is obtained.

18. Take—

Epsom salts	℥ss	½ ounce.
Sal-volatile	ʒi	1 drachm.
Water	℥ii	2 ounces.

Mix. This draught to be taken at bedtime, or the first thing in the morning.

19. Take—

Epsom salts	℥iss	1½ ounces.
Carbonate of magnesia	ʒii	2 drachms.
Sal-volatile	ʒi	1 drachm.
Antimonial wine	ʒii	2 drachms.
Water	℥vi	6 ounces.

Mix. Take a fourth part every night at bedtime.

Sweet spirits of nitre	ʒi	1 drachm.
Powdered rhubarb	ʒi	1 ,,
Tinctures of calumba or gentian	ʒii	2 drachms.

may be severally added to No. 19 as laxatives, when patients are unable to take pills.

In all cases where Epsom salts, or any salts that crystallize are used, they should be previously dissolved in boiling water. The doses prescribed in the above mixtures will have even a more beneficial effect if taken in the same quantity of warm water.

Persons who exhaust their systems by constantly taking aperient medicines, lose power and become nervous and emaciated. The want of regular action in the large intestines is frequently the result of incomplete digestion; in which case it will be most prudent always to attend to the stomach, first, by neutralizing any acidity therein, and then to follow it up by some mild form of aperient as above ordered. Active, and even drastic purgatives are often given without effect, except a prejudicial one, in costiveness; but by attention to the above advice the bowels will yield to a table-spoonful of castor oil given two hours after three or four grains of grey powder in a little jam.

In all forms of inflammatory actions of the mucous membranes of the bowels, indicated by the tip of the tongue being red and glary, the only admissible form of aperient is the acid and anodyne, Nos. 16 and 17.

Looseness of bowels from an irritative diarrhœa or cholera may arise, as I have said, from two distinct causes—a congestive and an inflammatory action. If the former,—then the chalk is necessary; if the latter,—the acid and opiate plan is most useful.

20. Take—

Prepared chalk	℥ii	2 ounces.
Water	℥vi	6 ,,

Mix. Take two table-spoonfuls after each liquid motion.

21. Take—

Prepared chalk	℥iv	4 ounces.
Water	℥vi	6 ,,

Mix. Take one table-spoonful every hour or two until the action has stopped.

In the more violent and rapid inflammatory actions of mucous membranes in tropical climates—such as the inflammatory cholera and dysentery, where the vital elements of life are disengaged with inconceivable rapidity, the principles I have here laid down will be found of the highest importance—namely, that instead of calomel and the other mercurials, so madly used and vaunted as the sheet-anchors for these critical diseases, the nitrous acid with opiates combined therewith, or taken in pills, will be found far better.

22. Take—

Nitrous acid	ʒi	1 drachm.
Paregoric elixir	ʒiii	3 drachms.
Syrup of red poppies	ʒiii	3 ,,
Water	℥v	5 ounces.

Mix. Take one table-spoonful every hour.

23. Take—

Nitrous acid	ʒi	1 drachm.
Paregoric elixir	ʒvi	6 drachms.
Syrup of red poppies	ʒiv	4 ,,
Water	℥ivss	4½ ounces.

Mix. Take one table-spoonful every two or three hours.

24. Take—

Nitrous acid	ʒi	1 drachm.
Laudanum	ʒi	1 ,,
Syrup of red poppies	ʒiv	4 drachms.
Water	℥v	5 ounces.

Mix. Take one table-spoonful every three hours.

25.—

The above, No. 24, with opium wine, or Battley's solution, ʒi (1 drachm).

26. Take—

Dilute nitric acid	ʒi	1 drachm.
Dilute muriatic acid	ʒi	1 ,,
Tincture of gentian	ʒii	2 drachms.
Paregoric elixir	ʒii	2 ,,
Syrup of red poppies	ʒii	2 ,,
Water	℥v	5 ounces.

Mix. Take two table-spoonfuls every three hours.

As there is generally pain in both forms of diarrhœa and cholera, it is absolutely necessary to allay it.

In the inflammatory actions, when the acids are taken, one opium pill may be given every two hours until a decided benefit is produced. These acid medicines with the opium pills are of the utmost value in the arterial fevers, when the tongue is incrusted with a dry black fur and the teeth covered with black sordes. They supply the system with vital gases in which it is deficient, and check the action of carbon which is destroying the principles of life itself. In all sero-membranous diseases they are also of the greatest value, and much more to be depended upon than the mercurials; for they remove or cure disease, while the latter only does this by transferring disease to other parts.

In all inflammatory actions of the mucous membranes, the acids and anodynes, either for lotions, gargles, or medicines, are clearly pointed out as the most proper remedies.

27. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Syrup of red poppies	ʒii	2 drachms.
Water	℥vss	5½ ounces.

Mix. To be used as a gargle frequently, in common sore or ulcerated throats.

28. Take—

Nitric acid	ʒss	½ drachm.
Syrup of red poppies	ʒii	2 drachms.
Distilled water	℥vi	6 ounces.

Mix. To be used as a gargle.

N.B.—All acid gargles can be most judiciously applied by a large camel-hair brush, especially where there are ulcers about the tonsils; it mops them clean, and prevents the acid touching the teeth.

29. Take—

Nitric acid	♏xx	20 drops.
Distilled water	℥vi	6 ounces.

Mix. For a lotion for inflamed eyes. Bathe them twice a day with this lotion, by means of a linen rag. A little smarting does good.

30. Take—

Fresh made ointment of the red oxide of mercury ʒi (1 drachm).

For inflamed mucous membrane of the eyes. Insert a small piece into the outer corner of the eye once or twice a day, by means of a bodkin; when it will work round the globe of the eye. This is an excellent application for red eyelids, and will soon cure them and cause the eyelashes to grow again.

N.B.—This ointment has an acid, stimulating action, and readily cures weak eyes.

Bronchitis is rare as compared with bronchial congestions. This is indicated by the tongue presenting a distinct red appearance down its centre. In some persons a simply cleaner state in this part may be noticed, gradually increasing to a perfectly crimson colour, as compared with the rest of the organ. When there is inflammation of the mucous membranes of the stomach combined with bronchitis, portions of the tongue on each side of the central division appear red as well. Thus it is of the greatest importance to be able to discover by such ready and easy means the lurking danger—the remedy for which is as simple as it is efficacious, both for the cure of the disease or to allay the attendant hard dry cough accompanying it.

31. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Paregoric elixir	ʒii	2 drachms.
Syrup of red poppies	ʒii	2 ,,
Water	℥vss	5½ ounces.

Mix. Take a dessert-spoonful frequently, or whenever the cough is troublesome.

32. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Ipecacuanha wine	ʒss	½ ,,
Paregoric elixir	ʒii	2 drachms.
Syrup of red poppies	ʒii	2 ,,
Water	℥v	5 ounces.

Mix. Take one table-spoonful every hour.

33. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Laudanum	ʒi	1 ,,
Syrup of red poppies	ʒii	2 drachms.
Water	℥vss	5½ ounces.

Mix. Take a dessert-spoonful every hour.

34. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Paregoric elixir	ʒiii	3 drachms.
Tincture of digitalis	ʒi	1 drachm.
Syrup of red poppies	ʒii	2 drachms.
Water	℥v	5 ounces.

Mix. Take one table-spoonful every one or two hours.

From the appearances of a hectic flush with fever and thirst, a dry red tongue, and frontal headache, any one may know at a glance the stealthy mischief at hand, and, what is of far greater consequence, fix unmistakably on the use of acid medicines, combined with anodynes. A few doses of the mixtures prescribed above will generally suffice, or the bitter elements may be added, as in the following:—

35. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Paregoric elixir	ʒiii	3 drachms.
Tincture of gentian	ʒii	2 ,,
Syrup of red poppies	ʒii	2 ,,
Water	℥v	5 ounces.

Mix. Take one table-spoonful every hour.

36. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Paregoric elixir	ʒii	2 drachms.
Tincture of calumba	ʒii	2 ,,
Syrup of red poppies	ʒiii	3 ,,
Water	℥v	5 ounces.

Mix. Take two table-spoonfuls every three hours.

The infusions of gentian and calumba may also be used instead of the water.

The use of quinine in tropical climates—whether in the absence of fever as a preventive thereof, or in the actual presence of fever itself—is one of the best admitted practices, unsupported by a philosophy, with which I am acquainted. Nevertheless, if the highly concentrated bitter properties together with its alkaloid base, and the acid with which it is combined, supply simultaneously two elements in which the system is deficient during fevers, then a very good philosophy may doubtless be laid down for its beneficial actions.

As regards quinine, when intended for a mixture, it should first be put into a bottle with a little water, and shaken up together; the intended quantity of acid may then be put to it. If only enough be required to dissolve the quinine, it should be added drop by drop till clear; any larger quantity of acid required may be added.

37. Take—

Quinine	gr. xxxvi	36 grains.
Dilute sulphuric acid; as much, drop by drop, as will dilute it.		
Water	℥vi	6 ounces.

Mix, as above directed. One table-spoonful to be taken every three hours.

38. Take—

Quinine	gr. xxxvi	36 grains.
Dilute sulphuric acid	ʒi	1 drachm.
Water	℥vi	6 ounces.

Mix. One table-spoonful to be taken every three hours.

Each dose contains three grains of the quinine.

39. Take—

Quinine	ʒi	1 drachm.
Dilute sulphuric acid	ʒi	1 ,,
Water	℥vi	6 ounces.

Mix. One table-spoonful to be taken three times a day, or two table-spoonfuls twice a day.

40. Take—

Quinine	ʒi	1 drachm.
Dilute sulphuric acid	ʒi	1 ,,
Paregoric	ʒiii	3 drachms.
Water	℥vss	5½ ounces.

Mix. One table-spoonful to be taken three times a day.

The simple anodyne or paregoric, as given in No. 40, will prove useful in case that the quinine or acid gripes the bowels, as the latter will do occasionally; and, indeed, wherever quinine and acid are necessary, the addition of an anodyne is never out of place.

41. Take—

Quinine	ʒi	1 drachm.
Dilute sulphuric acid	ʒi	1 ,,
Syrup of red poppies	ʒiii	3 drachms.
Water	℥vss	5½ ounces.

Mix. One table-spoonful to be taken every three hours.

42. Take—

Quinine	ʒi	1 drachm.
Nitrous acid	ʒss	½ ,,
Paregoric	ʒiiss	2½ drachms.
Syrup of red poppies	ʒiv	4 ,,
Water	℥v	5 ounces.

Mix. One table-spoonful to be taken three times a day.

The last of these prescriptions (No. 42) will prove extremely beneficial after a slight dysentery or inflammatory cholera, when the tongue is red; and it should be persisted in for some time, especially in tropical climates, where the mixture will bear an increase of the nitrous acid to one drachm, with benefit to the patient; or larger doses of the quinine, according to circumstances.

Having thus shown how a simple system of medication may be adopted for adults in the various forms of congestive as well as of inflammatory actions, it behoves me to speak separately of the diseases of infants at the breast and children after being weaned, up to a certain age. Their diseases are easily managed, if care be taken not to complicate them with drugs; no forms of which should be used that have any cumulative properties in them, nor any administered but that class which neutralize morbid elementary matter or carry it away. For these reasons the early use of the mercurials is to the last degree pernicious; for, when once these are commenced with, medication never ceases. If a child has excess of self-dependent power, and gets a series of plethoric diseases leading up to fits, convulsions, and infant apoplexies, how easy is their reduction! If another child, on the other hand, has its natural powers in abeyance, how simple are the means of exciting them! Again, supposing the natural powers to be well balanced, but still, from fault of diet, or the appropriation of it, an unsatisfactory condition ensues, how simple is the mode of correction! In short, a general adherence to the rule of never giving any drug of an absorbent character, but simply correcting and keeping the whole system free and clear of morbid elements, forms the whole philosophy of infant medication.

The following formulæ will be found useful for the slighter congestive maladies of infants and children:—

43. Take—

Ipecacuanha wine	♏xxx	30 drops.
Water	℥i	1 ounce.

Mix. Give a tea-spoonful every three hours.

44. Take—

Ipecacuanha wine	♏xxx	30 drops.
Simple syrup or sugar	ʒi	1 drachm.
Water	℥i	1 ounce.

Mix. Give two tea-spoonfuls three times a day.

Both the above should be administered soon after meals.

45. Take—

Ipecacuanha wine	ʒss	½ drachm.
Carbonate of magnesia	ʒi	1 ,,
Water	℥ii	2 ounces.

Mix. Give a dessert-spoonful frequently.

46. Take—

Ipecacuanha wine	ʒss	½ drachm.
Sal-volatile	ʒss	½ ,,
Carbonate of magnesia	ʒi	1 ,,
Powdered rhubarb	ʒss	½ ,,
Simple syrup	ʒi	1 ,,
Water	℥iii	3 ounces.

Mix. Give a dessert-spoonful when griping pains arise, attended with slimy green motions, crying, and general distress.

This acts as an antacid, and at the same time carries off elements which have been neutralized.

47. Take—

Ipecacuanha wine	♏xx	20 drops.
Sweet spirits of nitre	♏xx	20 ,,
Prepared chalk	℥ss	½ ounce.
Water	℥iss	1½ ounces.

Mix. Give a dessert-spoonful after every loose or griping motion, or in diarrhœa. Should the pain be great, or the diarrhœa frequent, then add—

Paregoric elixir	ʒi	1 drachm.

48. Take—

Powdered rhubarb	ʒss	½ drachm.
Sal-volatile	ʒss	½ ,,
Prepared chalk	ʒii	2 drachms.
Water	℥iii	3 ounces.

Mix. Give a dessert-spoonful very frequently.

These act both as tonics and antacids, and are beneficial when infants lose flesh or become emaciated. Their object is to prevent too great an action of the bowels; thus giving time for Nature to derive from the fæcal deposits in the large intestines important nitrogenized and vital elements.

49. Take—

Prepared chalk	℥ss	½ ounce.
Water	℥iss	1½ ounces.

Mix. Give a dessert-spoonful after every liquid motion, if they be frequent, causing diarrhœa.

50. Take—

Prepared chalk	℥ss	½ ounce.
Simple syrup	ʒii	2 drachms.
Water	ʒx	10 ,,

Mix. Give a dessert-spoonful after each liquid motion, as in No. 49; the syrup is merely added to soften the rawness of the chalk.

51. Take—

Ipecacuanha wine	ʒii	2 drachms.
Simple syrup	ʒii	2 ,,
Water	℥ss	½ ounce.

Mix. Give a tea-spoonful every five minutes, until the child vomits.

52. Take—

Antimonial wine	ʒii	2 drachms.
Water	ʒvi	6 ,,

Mix. Give a tea-spoonful every ten minutes, till vomiting is excited.

These emetic-mixtures are to be given after a meal; No. 52 will be the more preferable when children are gross and plethoric, pale-looking, waxy, or doughy—a state that too frequently precedes convulsions from an overloaded stomach. On the day following a vomit and the use of the antacid medicines; two or three grains of the grey powder may be given, followed in two hours afterwards by a tea-spoonful of castor oil, which serves to carry off the powder, so that it may not become absorbed; whereas if the castor oil be given alone, it often produces costiveness of the bowels afterwards.

53. Take—

Ipecacuanha wine	ʒi	1 drachm.
Carbonate of soda	ʒss	½ ,,
Sweet spirits of nitre	ʒss	½ ,,
Syrup of saffron	ʒii	2 drachms.
Water	℥vss	5½ ounces.

Mix. Give a dessert-spoonful every two or three hours.

54. Take—

Antimonial wine	ʒi	1 drachm.
Carbonate of soda	ʒss	½ ,,
Sweet spirits of nitre	ʒss	½ ,,
Syrup of saffron	ʒii	2 drachms.
Water	℥vss	5½ ounces.

Mix. Give a dessert-spoonful frequently, if the breathing is oppressed.

Both of these last mentioned will be found useful in measles as antacids, for the purpose of keeping the patient a little nauseated. He should likewise be kept very warm, so that the eruption may not be checked. Should the latter occur, and the breath be drawn with difficulty or through distended nostrils, it will be requisite to apply a mustard-poultice; and should not that produce sufficient counter-irritation, then apply a leech to the chest.

55. Take—

Compound tragacanth powder	ʒss	½ drachm.
Ipecacuanha wine	ʒss	½ ,,
Tincture of balsam of tolu	♏x	10 drops.
Simple syrup	ʒi	1 drachm.
Water	℥iii	3 ounces.

Mix. Give a tea-spoonful very frequently.

56. Take—

Compound tragacanth powder	ʒss	½ drachm.
Sweet spirits of nitre	ʒss	½ ,,
Simple syrup	ʒss	½ ,,
Tincture of balsam of tolu	♏x	10 drops.
Water	℥iii	3 ounces.

Mix. Give a tea-spoonful very frequently.

These are valuable in the congestive coughs and colds to which infants and children are so frequently subject; and No. 56 is more especially beneficial when the skin is dry and perspiration required.

Thus, then, all the congestive diseases incident to infants and children may be cured by very simple medicines; yet, however valuable these may be, they should always be given warm.

In all the congestive actions for which the foregoing prescriptions are requisite, the tongue will present a variety of white, coloured, and more or less furred appearances; and it is necessary to recollect that as disease *progresses*, so the fur gradually occupies the whole surface of the tongue *from edge* *to edge*, as well as *from the back to the tip*—but that if disease is on the *decline*, the fur will occupy the centre alone, going gradually backwards, *leaving the edges and the tip.* Thus, by a simple rule, unerringly detected by the eye, that form of medication can be adopted which shall arrest disease or hasten its departure. In the same way, also, is pointed out when a more nourishing diet should be commenced; for delay in this is not unfrequently attended with injurious consequences.

Again, the more aggravated cases of congestive action will —according to the seasons and many other circumstances, occurring in the mansion as well as the cottage,—frequently change to or terminate in scarlet-fever. The tongue, before furred and coated, will, when this happens, become suddenly clean and red; the body and face being meanwhile suffused with a scarlet blush. The following forms of medicine, quite opposite to the preceding, will now be as imperative as the others were before:—

57. Take—

Dilute muriatic acid	ʒii	2 drachms.
Syrup of red poppies	ʒii	2 ,,
Water	℥vss	5½ ounces.

Mix. Give a tea-spoonful or dessert-spoonful every hour or half-hour, according to the age of the child.

58. Take—

Dilute muriatic acid	ʒiss	1½ drachms.
Paregoric elixir	ʒii	2 drachms.
Syrup of red poppies	ʒii	2 ,,
Water	℥vss	5½ ounces.

Mix. Give a dessert-spoonful or table-spoonful every hour or two, according to the age of the child.

59. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Syrup of red poppies	ʒii	2 drachms.
Water	℥vss	5½ ounces.

Mix. Give a dessert-spoonful or table-spoonful every hour, according to the age of the child.

60. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Paregoric elixir	ʒiii	3 drachms.
Syrup of red poppies	ʒii	2 ,,
Water	℥v	5 ounces.

Mix. Give a dessert-spoonful or table-spoonful every hour or two, according to the age.

N.B.—These medicines, unlike those of an alkaline character, may be given cold. Should the throat be sore, which is always more or less the case, let the mixture be taken into the mouth, and if it be not too hastily swallowed, the throat will get well gargled therewith. In these cases it is imperative that the bowels should be kept as free from any action as possible, because success is always most certain when no action occurs from the commencement to the height of the fever, which generally takes three or four days. If the bowels act naturally, add a larger portion of paregoric. Should any inordinate action come on, or more even than one or two actions take place every twenty-four hours, the brain will become disturbed, as indicated by wanderings of the mind and pain across the forehead. Arrest these purging actions by half a grain or a grain of opium in the form of a pill. It is seldom, however, that the brain is affected if the bowels are quiet. Some cases of scarlet fever are very mild; others are attended with a slight engorgement of the lungs which will be indicated by the tongue presenting a glary-red and varnished, slimy appearance, accompanied by more or less distress in the action of the heart. These appearances do not occur unless there is a low typhoid state, when the stimulus of wine, &c., may be necessary.

61. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Ipecacuanha wine	ʒi	1 ,,
Syrup of red poppies	ʒii	2 drachms.
Water	℥vss	5½ ounces.

Mix. Give one table-spoonful every hour or two.

This will exert a slight stimulating action on the bronchial tubes.

62. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Ipecacuanha	ʒss	½ ,,
Tincture of digitalis	ʒiss	1½ drachms.
Syrup of red poppies	ʒii	2 ,,
Water	℥vss	5½ ounces.

Mix. Give one table-spoonful every hour or two.

As soon as this relieves the heart's action and lessens the fever, withdraw the tincture of digitalis, and substitute paregoric, as in the former prescriptions.

Scarlet-fever is the only arterial, or inflammatory alkaline fever incident to infants and children, in which the acids and anodynes are employed. Almost all their other fevers are venous or congestive, and require the alkaline treatment; for when the obstructions are removed which caused them, they speedily vanish, and convalescence ensues. After the subsidence of scarlet-fever it is quite unnecessary, but rather injurious, to give any form of aperient medicine; whereas after measles it is absolutely necessary to purge the patient thoroughly.

Children, and young persons generally, may be beneficially treated with aperients in powders, which are preferable for them to any other form of that class of medicines; and the following prescriptions will be found useful:—

63. Take—

Grey powder	1 or 2 grains.
Scammony	4 or 6 ,,

Mix in a mortar. To be taken at bedtime.

64. Take—

Grey powder	2 or 3 grains.
Powdered jalap	6 or 8 ,,

Mix in a mortar. To be taken at bedtime.

65. Take—

Powdered jalap	3 or 4 grains.
Powdered rhubarb	6 or 8 ,,

Mix in a mortar. To be taken when most convenient.

66. Take—

Scammony	3 or 4 grains.
Powdered rhubarb	4 or 6 ,,

Mix in a mortar. To be taken when most convenient.

The powders Nos. 63 and 64 must be mixed in a little jam or honey, or in sugar and water, but *not* in treacle.

67. Take—

Powdered jalap	3 or 4 grains.
Powdered rhubarb	4 or 6 ,,
Carbonate of magnesia	6 or 8 ,,

Mix in a mortar. To be taken when convenient.

68. Take—

Powdered rhubarb	6 or 8 grains.
Carbonate of magnesia	8 or 10 ,,

Mix in a mortar. To be taken when convenient.

The two last powders should be well mixed with sufficient water to make a creamy-like draught, neither too thick nor too thin. Those, however, that contain the grey powder and scammony *should never* be mixed with water, as they act far better when concentrated into a thick mass. Nos. 63 and 64 are good medicines to dislodge worms from the system, and may be followed by half a teaspoonful of castor oil.

By the means above indicated, the diseases of infants can be managed with a great degree of ease and simplicity, as well as with almost certain success. They seldom require strong alkalis; because, if the stomach be loaded, an emetic after a meal will speedily relieve them, and there is little acidity left afterwards to correct. It is a rare occurrence for children's LIVERS to get out of order, and when they do, emetics relieve them. If they be plethoric, keep them occasionally a little nauseated with ipecacuanha, and give them only the scantiest supplies of nourishing diet.

The neutral or non-chemical medicines are exhibited as tonics or stimulants; for instance, the infusion of the various barks or their extracts, or combined with a sedative in nervous actions. The following formulæ are for adults :—

69. Take—

Extract of gentian	grs. xii	12 grains.
Powdered rhubarb	grs. xxxvi	36 ,,

Incorporate with a spatula on a slab, and divide into twelve pills; one or two to be taken twice or thrice a day between the hours of meals.

70. Take—

Extract of henbane	ʒss	½ drachm.
Powdered rhubarb	ʒss	½ ,,

Incorporate with the spatula on a slab, and divide into twelve pills; one to be taken two or three times a day.

Should the extract not be soft enough to take up the powder, add water sufficient to accomplish it.

71. Take—

Extract of gentian	grs. xii	12 grains.
Extract of henbane	grs. xxiv	24 ,,

Incorporate as above, and divide into twelve pills; one to be taken at eleven and four o'clock.

72. Take—

Extract of henbane	grs. xxx	30 grains.
Camphor	grs. xxiv	24 ,,
Spirits of wine; enough to dissolve the camphor.		

Incorporate, and divide into twelve pills, of which from two to five make a dose.

The last of these (No. 72) is a very valuable pill for young women suffering from pain or spasms at certain periods. Two or three should be taken at such times, with a little hot, but weak spirit and water,—as the spirit dilutes the camphor in the pill. After four, eight, or twelve hours, two more may be repeated, if in pain,—which will come on at those periodical hours. Their action is to relieve nervous excitement and tranquillize the system.

Medicines which act on the absorbent system are often most valuably employed, and save much suffering,—as for instance during the early periods of nursing after confinements. Should there be a tendency to very full breasts, it may be expedient to reduce the action of the milk-glands, and so to prevent those most painful occurrences incident to maternity,—namely, abscesses of the breast. The following pills will, under such circumstances, be found of great service, as acting on the absorbents, lessening the quantity of milk, and often preventing engorgement of the milk-tubes and the formation of abscesses.

73. Take—

Tartarized antimony	grs. iii	3 grains.
Grey powder	grs. iii	3 ,,
Powdered opium	grs. vi	6 ,,

Spirits of wine; enough to make a mass.

Divide into twelve pills; one to be taken two or three times a day.

74. Take—

Tartarized antimony	grs. iii	3 grains.
Grey powder , ...	grs. iii	3 ,,
Dover's powder	grs. xii	12 ,,

Spirits of wine; enough to make a paste.

Divide into twelve pills; one to be taken every four hours.

Mineral emetics are useful in cases where vomitings are called for, when the system is unable to bear the depression consequent on antimony or ipecacuanha.

75. Take—

Sulphate of copper	grs. ii	2 grains.
Water	℥i	1 ounce.

Mix. Give a dessert-spoonful every quarter of an hour till vomiting is produced. The effect thus regulating the quantity taken for a child.

76. Take—

Sulphate of zinc	grs. x ad xx	10 to 20 grains.
Water	℥i	1 ounce.

Mix. Give a dessert-spoonful every half-hour till vomiting is produced. The effect regulating the quantity.

N.B.—For adults the whole may be given at one dose of either prescription.

Opium is given in all forms—from its crude state to its many chemical alliances, as in the acetates, muriates, &c. of morphia; so that the system that cannot bear the crude form may yet be beneficially acted on by the chemical compounds. The wine of opium, prepared by Battley; laudanum, &c., are largely and usefully employed in many cases. The crude opium has been more objected to than it deserves: notwithstanding this, I have found the following pills very useful:—

77. Take—

Powdered opium	grs. ix	9 grains.

Rectified spirits of wine; enough to make a paste, and formed into twelve pills.

One to be taken when in pain, or oftener if required.

78. Take—

Powdered opium	grs. xii	12 grains.

Rectified spirits of wine; to be made into twelve pills.

One to be taken when in pain, or to quiet the system generally.

Many disorders are produced from the mercurials; amongst which are forms of rheumatism, the pains of which are deeper seated than those which have no mercurial taint in the system. For these the following prescriptions are useful, as the iodide of potassium neutralizes the mercurial poisons:—

79. Take—

Iodide of potassium	ʒss	½ drachm.
Syrup of saffron	ʒii	2 drachms.
Water	℥vi	6 ounces.

Mix. Take two table-spoonfuls three times a day.

80. Take—

Iodide of potassium	ʒi	1 drachm.
Paregoric	ʒii	2 drachms.
Syrup of saffron	ʒii	2 ,,
Water	℥vss	5½ ounces.

Mix. Take one table-spoonful every three hours.

N.B.—There are many cases of glandular swellings and tendencies to cancer where this useful preparation may be most advantageous if boldly used.

81. Take—

Dilute sulphuric acid	ʒi	1 drachm.
Paregoric elixir	ʒii	2 drachms.
Colchicum wine	ʒii	2 ,,
Syrup of red poppies	ʒii	2 ,,
Water	℥v	5 ounces.

Mix. Take one or two table-spoonfuls every three hours.

82. Take—

Nitrous acid	ʒss	½ drachm.
Paregoric elixir	ʒiii	3 drachms.
Colchicum wine	ʒii	2 ,,
Syrup of red poppies	ʒii	2 ,,
Water	ʒvss	5½ ounces.

Mix. Take one table-spoonful every three hours.

These prescriptions are beneficial in all rheumatic or inflammatory pains in the upper extremities—or all parts above the hips. Where these pains occur below the hips or lower extremities, half an ounce of Epsom salts may be dissolved in half a tumbler of hot water, and one dose of either of the above prescriptions should be added to it, and drank warm, or taken occasionally to relieve them.

There can be no doubt that whatever medicines are administered, Nature has but one course to pursue, and that their effects must be either beneficial or hurtful. Poisons would not poison, nor nourishing things nourish, if this were not the case. If elements exist in the system which are the cause of disease, and those of a similar kind be added, disease must increase; but if, on the other hand, such elements are given which decrease or neutralize the power of those which cause disease, then disease, as a matter of course, is diminished, evidently by a species of antagonism. Hunger is allayed by its antagonist—food; thirst, by its antagonist—fluid; acids, by their antagonists—alkalis; and a state of system deficient of acid elements by their antagonists—the acids. Every part of the body exhibits this fact. The union of opposite elements which produce its various solids, fluids, and gases, are formed by the laws of the atomic theory of their combinations; but their first principles of action are antagonistic ones, for the very purpose of producing other elements to effect like ends. Debility is opposite to power;

obesity to wasting; and depression to excitement. Cold is relieved by its antagonist—heat, and vice versâ. Deficiency is made up by addition and superfluity, by withdrawing that which produces it. Excess of electricity is relieved by non-electric elements; precisely the same as non-nitrogenized or non-vitalized matters are the antagonists of the nitrogenized and vital agents. If medicine does good, it must be upon the principle of neutralizing or opposing elementary matter, which is the cause of disease, consequently by an antagonism; if it does harm, it is by adding to that which produces disease. Therefore, whatever plausible reasons may be set forth under the head of '*Similia similibus curantur*' are fictions. As well may fire put out fire, and water decrease a deluge. Whatever good that is done by medication by any sect or class, depend upon it is done by some natural antagonism; even if good is done in the end by wrong medicines, it is by some inscrutable and occult means in opposition to our philosophy. Good cannot be corrected by evil; nor can evil be made good by any addition to it:—it is impossible. Battles are won by the strong or by strategy, which is equal to strength: but they are not won by their opposites. Nothing can make wrong, right: or right, wrong; each must increase in power by an addition to its own elements. Natural laws can act but in one way, and the nearer we approximate to them, the more good we do:—they may appear complicated in such a wonderful piece of machinery as the human body, and frustrate our best intentions: but we are perhaps more indebted to their opposition to our acts than we are aware of. If allopathy, if homœopathy, if charlatanism do good at any time, it is not by their present theories. Any mode of practice which requires abstruse reasoning or metaphysical arguments to support it, may be set down as doubtful: because truth requires so few words, whilst that which is desired to be believed requires many. High-flown assertions often entrap, as well as perplex the mind; and those who have a leaning towards anything occult, yet cannot discriminate, believe by a species of faith, because they cannot understand. From the fact of the homœopathists using the active elements of very powerful drugs, which are always alkaloids, taken in conjunction with those principles which I have laid down, that 75 to 80 per cent. of the disorders we have to treat are of the congestive or acid character,—they would seem to do right in their treatment, but are decidedly wrong in their philosophy. Their doctrine should be, '*Contraria contrariis curantur*,'—or diseases cured by antagonistic powers to those which produced them; not '*Similia similibus curantur*,'—or 'Like cures like;' meaning, that by adding to the elements which produce disease, they cure it. This I have proved to be a fiction, and some day they must come into these views. I feel I should have but little difficulty, if I had but the time practically to study their cases glossologically, and then, presuming them to be honest in their medication, to show them a great truth, which they have evidently overlooked. Even this sect may be useful ultimately to science if they can show us a readier, easier, and simpler form of administering medicine.

Throughout the whole scheme of medication I have propounded in this work, it will be seen how little I have urged the necessity of aperient medicines, besides totally excluding blue-pill and calomel from all treatment, either by themselves or in combination with other drugs. Close observations in a new field of thought, and a large practice, extending to now thirty years, warrant me in declaring that for the last twenty of these I have not given these drugs in cases where the empiricism of the profession have pronounced them to be absolutely necessary; yet I have successfully treated those cases without them. If any say, what substitute have you for these medicines? I reply, none! I simply take a different view of the causes of disease, and how I have acted I have endeavoured to illustrate in this work by the general principles I have laid down.

It will be seen that while on the one hand I have set forth a number of prescriptions to meet certain conditions of the system, they are, on the other, to be considered rather as illustrative of the principles laid down to meet the causes of disease. The range of the pharmacopœia is wide, and my object has been to show that, as disease is indicated by a prevailing character of the general secretions of the body, whatever specific form it may take, it must be relieved by an antagonism of the morbid elements which produce it. It being a fact, that the same train of causes will produce very many specific diseases which require the self-same class of remedies; it is not, therefore, the disease which has to be so much considered as these. This is the very end pursued by Nature herself when no artificial remedy is taken, or, in fact, to be obtained. This constitutes the VIS MEDICATRIX NATURÆ, or power which Nature has to cure, without the aid of art. It is what she is always doing every minute of our lives; it is this power which makes disease the exception and not the rule, and by which the body is kept in health. Were it not so, disease would be a rule, and not an exception: but if art has never yet had broad rules for its guidance, it has necessarily always made disease a difficult, instead of an easy, problem. It has, in fact, looked to specialities and specificalities, consequently laid down its rules for these alone. Hence we find so many varied works on distinct diseases with their constant differing treatment by every generation of men, who illustrate their own views only to be refuted by their successors. Thus the books and writings of a previous age are set aside by the novelties of the present; so that each writer gains a temporary fame sufficient for his day,—has his term of notoriety,—becomes duly forgotten, making way for other candidates for popular favour. Still the same facts and the same laws present themselves, and thus the great car of the "practice of medicine" runs in the same groove. Unless there comes some great revolution of thought, the same things would run on to the end of time.

The new principles I offer to the consideration of the practical observer are those which time has tested; but it was evident to me that when I published my system of Glossology in 1843, that I was at least a generation before the age; for it was neither received then, nor is it acknowledged now. I have waited patiently for those who were even influential in condemning it to pass from the stage of their labours, and have seen them end their career by becoming medical atheists, and believing in nothing. These are the phases which science has to pass through.

A correspondent of the 'Lancet,' attached to the Southern Hospital of Liverpool, has given some account of the fever which broke out there, imported by some Egyptian sailors. He says:—'The character of the fever has been that of true typhus: at first headache, flushed face, rigours, thirst, deafness, and suffused conjunctivæ. On the sixth or seventh day an exanthematous eruption showed itself on the body, arms, and legs. The pulse rose in some cases to 130 per minute; the tongue gradually coating with a white fur,—then, as the disease progressed, becoming brown and dry. In two cases, however, which proved fatal, the tongue kept moist and very little coated, but swollen; and in a third, which recovered, an aphthous eruption appeared on the fauces and back part of the tongue. In most instances the skin was moist after the second or third day, and a tendency to diarrhœa was manifested in nearly all: more or less delirium was also present. In favourable cases the fourteenth day was generally the turning point of the disease; whilst the fatal cases terminated before that date.'

This is the description; and beyond the treatment being chiefly stimulant, nothing is said of medicine, which was probably in accordance with the best received opinions, or rather the opinion of every man who had to treat any of the cases. 'Headache' is spoken of; but no parts named which could lead to the diagnosis of the organs, having distinct sympathy with such; whilst the almost accidental mention of the appearances of the tongue leads to no philosophy of the state of the secretions; the absence of all knowledge of the Glossological divisions completely shuts out all traces of the organs consecutively affected, and consequently the law of the gradation of the disease, as it appeared in the various subjects which became infected.

Thus:—'The tongue gradually coating with a white fur, then, as the disease progressed, becoming brown and dry.' This condition is seen and mentioned; but what language does it not speak to the Glossologist? It shows the gradual march of the acid or congestive elements on the mucous membranes in the venous system, and exemplifies the rapidity with which these flew to the serous membranes, until the arterial circulation became implicated, thus following the laws here before set forth; every stage pointing out the specific remedy. The exanthematous or pocky eruption indicated the crisis of the venous or congestive and acid elements, precisely as small-pox does—when the greatest support is necessary. Lastly, that which was most conclusive was the 'tendency to diarrhœa,' always accompanied by 'more or less delirium;' a fact that the bowels should have been kept confined, because the vital powers were endangered by the large intestines parting with the elements, which I have shown engender the vital gases. What medicines might have been used to cause these 'diarrhœas' I cannot say; but as I know the practices of empiricism, I cannot refrain from supposing that the poor *liver* must have been, as it always is, considered to be at fault, and if the bowels did not act, which was their natural law under the circumstances, they were duly attempted by art. Such facts as these have yet no place in medical ethics; and therefore it follows, that if the bowels were confined they must be opened. I of course can only judge of what course might have been pursued by the way in which medicine is now practised. Nor can blame or censure be given for any acts done according to laws which are generally recognized. Surely the present age does an injustice to itself, if it takes for granted any tenets of the schools, which are capable of expansion or are so unstable as to bear refutation. It is a degeneracy of mind slavishly to submit to dogmas if they be inconclusive. If advance took place in all the consecutive sciences, which led our predecessors to new conclusions, it necessarily follows, that if a further advance ensues, we cannot remain stationary. The more perfect understanding of the wondrous machinery of the human body in all its phases has considerably advanced, while the actual application of medicine remains the same; no certain results accompany it, but all is confusion and doubt.

The profession has constantly to hear the note of reprehension sounded in their ears by the public journals on all occasions when their shortcomings are evident. Thus:—'But is it true or false that, as a general rule, disease remains no less formidable and mysterious than ever, and practitioners, as a body, have not advanced in science and sagacity in a ratio with the intellectual development of the day? Their knowledge in a hundred essential respects is defective; and in nine cases out of ten, baffled by the mysteries of Nature, they have recourse to the hazards of the grossest empiricisms."*

On all important trials, when medical witnesses are examined, the public are shocked by our differences of opinion, and reproach both ourselves and our art. If the profession itself will not move on, the public through their own journals should make it; and if they take an interest in the matter, and acquaint themselves with some knowledge of medicine, as they do with all other studies, there will be hope that great changes will soon take place.

---

* *Daily Telegraph* (Leader), November 3, 1860.

In the profession itself, the most important step that has been taken lately in the right direction is that of the union of the medical students of all the Metropolitan Hospitals, uniting to form one great Medical society, to review and discuss the teachings at the various schools of medicine. They little know what they are doing, or to what end this act will lead. If they travel in the same groove of thought which now exists, or meet only to uphold the doctrines and opinions of their teachers, they will be lost; but if they emancipate their young minds from all dogmatism and prejudice, they will regenerate their order. They must raise the practice of medicine to the dignity of a science; yet as learners they are as likely to imbibe specious falsehood as truth; for they are necessarily dependent upon the experience of their professors. No man learns after he is forty; he then only lives to strengthen his opinions. The only true use of medicine is its correct application; yet this is the only unsound part of the physician's art.

To what does the whole study of the human body and all its uses and functions lead? Not to this simple knowledge alone; its various actions—its chemical constituents, or the diseases to which it is subject—but to the relief of them! If we stop short of this, then I admit that great things have been done by the industry of man; but if any say that the art of administering medicine has advanced commensurately with the knowledge of the body and its diseases, then I am at issue with one and all. I do not include the system of Hygiene, because that is a different thing altogether. I confine myself entirely to the administration of medicines, and affirm that this is a disgrace to the age, and an opprobrium on the profession itself which it ought not to tolerate. It is a fraud on the public by men who know its uncertainty, and who only give medicine in hope according to their own varied opinions or on tradition and authority. Having no definite knowledge of the chemico-vital causes of health or on what it depends, they presume to cure disease by endeavouring to put the body into that state of which they know nothing; to alleviate disease, yet see it daily increasing in intensity without knowing why, and not improbably, by the very means used to arrest it. This is a state of things that requires very different reasoning on to what has hitherto been brought to bear upon it.

The same thing may be said of the continental practices. Everything relating to the material lesion or specific disease is studied with hopes of verification in the dead body. No account exists of the law or cause of disease, or the chemico-vital condition of the elements of the body: all is physiology and pathology. The administration of medicine is a simple matter of personal opinion guided by no law. The continental physicians are contented with ptisans and to leave the matter to Nature—so, tether an Elephant with packthread; while the English school, more bold and daring, open a Geneva watch with a crowbar. All I can say is—Let us hope for better things some day.

CHAPTER XV.

CONCLUSION.

The practical physician a useful and necessary member of the community.—'Health and disease,' objects of that work.—Gradation of disease, by natural laws.—The present practice of medicine an art and mystery, not a science.—Disorders arising from great mental labour.—Stimulants pernicious to those who are of sedentary habits and write much; but necessary in some mental exertions largely combined with physical.—Fashionable follies in medicine and hygiene.—The stethoscope, auscultation, &c.

No one, I think, can misunderstand the end or the object of this small work; nor, I trust, its plain language, or the tenets set forth herein.

It was written to illustrate broad principles, and to assail the mystery that hedges about the practice of medicine; not in any way to place crude information in every hand, to supersede the practical physician in his manifold duties.

There is always too much knowledge, only to be obtained by hard labour, as the basis of the science of medicine, to make the physician a useful and necessary member of the community.

The object of my larger work on 'Health and Disease,' was to place in the hands of the public a certain amount of useful knowledge, unalloyed by what is objectionable in the usual works on domestic medicine, which I also found to contain no general principles. These seek rather to place the unlearned in the chair of the physician, and inculcate modes of treatment which only the greatest caution and experience ought to meddle with. Thus doing a small percentage of good and an immense percentage of injury. Independently of which, diseases are recorded in these works of which the virtuous class should be kept in ignorance. I was consequently impressed with the fact that much good and useful information of '*Ourselves*' was excluded from the education of youth of both sexes, because of these objectionable elements in other works, thereby closing the door of information to much that should be generally known. I therefore earnestly recommend my larger work on 'Health and Disease' to the favourable notice of the public, as containing much valuable matter in detail on the subjects herein so briefly treated. Of this small volume I can only trust that it may be found to contain much matter for thought, both to the professional and non-professional reader, though necessarily circumscribed from the desire to give the greatest possible amount of information in the smallest possible space. There is a great fact I wish to impress upon all, and that is—The gradation of disease. Nature never does violence to her own laws, and therefore the same steps which she takes in the gradual advance of evil must be retraced to the good, or from whence the departure was made. Simply to relieve the suffering body from disease, and say,—'Now it is better,' and not to know how this has been done, or the more healthful chemico-vital condition it has been brought into,—is not SCIENCE. It is the mere *Art* and *Mystery*, of something having been effected, which no one can explain.

I have here had no opportunity of speaking of many things which I should have liked to mention, or what is also so dear to scientific men, the proofs from cases of what is here stated. There will be no difficulty hereafter in doing this; for empiricism has heaped up so large a mass of its experience in its works and journals, that I can cull from these abundant evidence of the correctness of my own views, and illustrate from this source alone where it is itself correct and where its errors lie. In fact, for all the good it does, I can give it what it has never done for itself,—a philosophy. The few disciples I have gained to my own views can bear out the truth of my doctrines; and those whom I have had the pleasure of meeting in consultation have seen the success of a well-founded scheme, in cases of danger and difficulty, where there appeared no hope, and no light in the apparent obscurity of disease, yet have witnessed patients emerging from danger to a state of security, and ultimately to life and health. I can but deplore that even the arrangement here carried out is deficient in one respect, and that is, in the classification of diseases incidental to trades, to artisans, and to the various professions. It is apparent to everybody that the present is a hard-working age, both to the physical toilers and to the mental labourers; in fact the great strain put upon the latter in the field of literature, arts, sciences, engineering, politics, law, physic, and divinity, as well as the banking, manufacturing, and mercantile community, has never been equalled. With very many it seems to be a ruling passion that it is more honourable to wear out than to rust out. The difference in the diseases of these two classes is a wonderful study, as their opposite habits affect the laws of their natural economy. As one of the mental workers, I cannot help a common sympathy with my brethren, and a desire to warn them against common errors. Some are of iron frame, as well as will; others are of weaker frame, but indomitablo will and perseverance. These, as we have seen by their sad obituary, have too early worn themselves out. This question naturally suggests itself to me—Has medication had anything to do with this? I fear it has! Without self-sufficiency or egotism I will take my own case. I have been accustomed for years to work the whole day in my professional duties, with not a moment to spare for study. Two hours on the sofa after dinner has refreshed the mind at the expense of tho stomach. Ten or eleven o'clock finds me at my desk, where I remain till four and even five in the morning, and this is done at least two hundred and eighty nights out of the three hundred and sixty-five. My work on 'HEALTH AND DISEASE,' containing above six hundred and fifty pages, was written within these hours in sixteen months. Those who write can alone know its labours: the pen follows thought so quickly, that much is done only to be expunged on correction and re-correction; therefore double the quantity of matter is written to what is published. This small volume has occupied me six months of the same nightly labour. Now this is simply stated for the sake of illustrating the wear and tear of the body and mind, and consequent disorders attending great mental labour and loss of rest. In waking up from my nap, how often the acid fumes of an ill-digested dinner have come into the throat and mouth, and the evening began with a cob-webbed state of brain! The matter occupying the night's toil has often been a severe strain on the inductive and reasoning powers, and when it has been put on paper, as in this volume, a whole night's work has been half expunged on reading and re-reading for the sake of the greatest condensation. Now look at the effect of all this. I have called upon all the vital gases to aid the brain-secretions, if I may so call them:—constipation follows.

At another time, the subject being an anxious one, my liver has not secreted an ounce of bile in a week: at other times, irritation of the bowels has set up. Now what would have been my condition if I had not had some principle to guide me in correcting these evils? Suppose I had had to fly to empiricism for assistance, to state all my ailments so frequently produced from this pernicious course of life—for we must call things by their right names—I should have had aperients given me for one thing; stimulants and alteratives for another: blue-pill for my poor liver; and lots of other things. But I have been guided simply by Glossological laws; and SEEING thereby the general conditions of the bodily secretions, and by correcting them upon the principles I have laid down, I have as yet come out unscathed in health; whilst a night in bed now and then sets me all to rights.

Here then comes the warning to those who do the like foolish things for the sheer love of them, or propelled thereto by various motives; some for ambition; some for fame; some for honour; some, like myself, for the mere daily rations, a decent habitation, and some of the elegances of life, so congenial to any refinement of mind. One thing I have found of importance, that stimulants are bad. Dining with a friend, or a friend dining with me, with the accompanying hospitalities, puts a stop to all labour for that night. The combination of stimulants with hard mental labour, I believe does more to wear the body out than a moderate and generous support to the physical powers, without which the great mill of the mind would stand still. Some may aver they cannot work without stimulants: all I can say is, that if hard mental labour, thought, inductive reasoning, and writing for the public be the end, they should not be taken. If, however, we take the varied pursuits of the merchant, the banker, the politician, or some of these combined, where listening, reflection, and then oratory are concerned, then more stimulants may be taken than by him who has no such extraneous excitements. He that has to work by himself at his own desk, in the quietness of his own studio, to elaborate his own thoughts and excogitations, should not take stimulants. Young and energetic minds may work in these various grooves to some advantage; but more matured powers yield the better judgment. I am of opinion that up to the age of forty, men should store their minds by every possible means, both by reading and observation. This produces the full man. Then from this time to sixty, if there is anything to be elaborated, the physical and mental powers being mutually strong, when the pen is taken up to convey the mature deliberations of what has been acquired, there comes with it strength of argument. Great and early efforts are always seen to end in early decay; both body and mind are worn out. Genius flashes its sparks of fire in the young; but, like a meteor, exhibits its blaze of light, then vanishes for ever. These few hints may be useful to mental labourers. Above everything, let me advise them in their bodily ailments to eschew the mercurials, and to reflect on the causes of the one and the effects of the other with the same power that they bring to bear on their own peculiar studies, and then to follow simple and prudent measures to overcome them, and not to increase them by injurious practices.

Physical labour requires simple rest. Mental labour should always be accompanied by daily physical exercise:

this is a great secret; it should not be violent or fatiguing; but sufficient only to secure the active transitions of metamorphoses of bodily structures, in order to keep Nature's laboratories in due health and activity. If these induce a healthful state of the secretions generally, it follows that they also aid the healthful secretions of the brain. Industrious men should always avoid fashionable follies in medicine as well as hygiene: they cannot afford to make such sacrifices, nor can the world afford to lose them. Idle men may indulge in them to kill time, making an occupation out of them; and if they injure themselves in so doing, and die early, they are not missed,—their places are soon filled up. Let them have their full indulgences, if they may be called so. Let them take to hydropathy to-day, and be parboiled in Turkish and Roman baths the next, it matters not. Let them be allopaths, and imagine their livers to be always out of order at one time, and indulge their gratification in blue-pill and calomel; or let them become homœopaths at another, giving the system an entire rest from drugs, or only taking globules—

'Not half so big as a round little worm,
Pricked from the lazy finger of a maid'—

and imagine a thousand benefits therefrom. All these matters are worthy of the greatest reflection by the sensible men of the present day.

To my fellow-labourers in the great field of practical medicine, I offer some new ideas for their consideration. They have played with the stethoscope long enough. Auscultation and percussion have been great amusements to them, and have led, no doubt, to the knowledge of many new facts; but not improved their practical application of medicine. They have also led to many errors of opinion; for many persons to my own knowledge are now living who were pronounced *stethoscopically* moribund years ago. Let the ardent admirers of this species of diagnosis of disease reflect on their disappointments. I did intend a quarter of a century ago to attempt what has never yet been done, namely, a classification of all the bruits and sounds, distinguishing those produced by arterial and venous, congestive and inflammatory actions; as well as those from sero- and muco-membranous affections; but I discovered Glossology in time to prevent such an amount of labour. This I now offer, with the study of medicine on a fresh basis; both of which have hitherto been neglected, nay even contemned; nevertheless I am not disheartened thereby. All that I wish may be contained in the words of Tom Moore; that I may

'Win the wise,
Who frowned before,
To smile at last.'

ANALYTICAL INDEX.

ABDOMEN, cavity of, its contents explained, 4-5 ; pendulous conditions of, 86.
Ablutions, remarks on, 39.
Absorbents, 5, 15.
Acid elements, predominate over the alkaline, 35, 134 ; congestion of, 43-43.
Acid or congestive diseases, 76.
Acids, different kinds of, 152.
Air, component parts of, 31 ; necessary in congestive, hurtful to inflammations of lungs, 81, 97.
Albumen, component parts of, 28.
Alkaline, or inflammatory diseases, 76.
Alkalis and alkaloids, 152.
——— ammonia, magnesia, potass, soda, &c., with acids, form citrates, muriates, nitrates, phosphates, &c., as component parts of the structures of the body as well as the elements we take, 26, 27, 152.
Anatomy, what it is, 1.
Animal matters, what consist of, 27, 28.
Ankles, flexibility of, 1.
Antagonism, importance of in vital chemistry, 150, 179, 180.
Aperients, their excessive use condemned, 9, 11, 161, 163 ; useful after measles, 175 ; prescriptions for, 161, 162, 175.
Apoplexy, congestive and inflammatory, 73 ; congestive, explained, with treatment of, &c., 104-108.
Arms described, 1.
Art and mystery of medicine, 152.
Arteries explained, 5.
Asthma, treatment of, 86-87.
Atmosphere, state of, important to life, 41.
Auscultation and percussion, 47.

BACKBONE described, 2.
Baths and bathing, when good, and the reverse, 39 ; healthful to some and injurious to others, 71.
Bile and biliousness, remarks on, 78, 79, 155.
—— chemical constituents of, 27.
Bladder, situation of, 5 ; use of, 12.
Blisters, 3.

Blood, circulation of, 15; its duties, division into three, 16; arterial, 16; venous or residuary, 17; disease and purification of, 17-18; chemical constituents of, 26; heat of, 29; elementary poisons of, 36; deposit of its elements forms distinct structures, 44.

—— fevers, venous and arterial, 118.

—— letting improperly practised, 107; beneficial in venous, prejudicial in arterial fever, 141.

—— poison, 36; effects of in fevers, 135, 136, 137, 138; how produced, 158.

—— vessels, different kinds of, 5.

Bodily exercise important, 38.

Body, framework of, 1; chemical constituents of, 25, 149; commercially considered, 34; cleansing of, importaut, 136.

Boils, treatment of, 68.

Bones, different kinds of explained, 1-2; number in the body, 2; chemical constituents of, 25.

Books and their authors, 182.

Brain, explained, 5; division of, 19; chemical constituents of, 25; tracts on the tongue, 49.

Breasts, abscesses of, prevented, 177.

Breath tainted before meals, 59.

—— of life, 33.

Bronchial congestion, how produced, 43, 45; how indicated on the tongue, 55-56; distinct from bronchitis, 73, 88; explained, with treatment of, 82; drescriptions for, 160.

Bronchitis, how indicated on the tongue, 56; distinct from bronchial congestion, 73, 88; treatment of, 88.

Bruises and blows, treatment of, 69-70.

CALOMEL condemned, 130.

Caloric, *see* Heat.

Capillaries, 5, 16.

Cartilages, 2; chemical constituents of, 26.

Castor-oil, a good liniment in rheumatism, 100.

Causes, similar, produce many diseases, 182.

Cellular tissue, 3.

Charlatanism and science, the latter will ultimately triumph, 66.

Charlatans, remarks on, 65.

Chemical physicians, 144.

Chest, formation of, 3; contents of, 4; uses of contents of, 15-19.

Chicken-pock, cause of, 43; treatment of, 58.

Children, their diseases easily managed, 169; prescriptions for, 170, 180.

Cholera, congestive and inflammatory, 62, 73; inquiry into the epidemic one of 1854, 72, 113, 114; explained, 109; inflammatory, explained, with treatment of, 111-116; French prize offered, &c., 113.

Chyle and chyme distinguished, 8.

—— process of should be little interferred with, 154.

'Chymous,' a truer term than 'bilious,' 87.

Circulation of the blood, 15.

Classification of medicines, 152.

Cleansing of body important, 36, 38 ; of the feet, 40.
Clerical sore-throat, 84-85.
Cod-liver oil, 94.
Cold applications, when necessary, 69.
Colics, treatment of, 86.
Combination of drugs, 155.
Combustion, union of elements by antagonism, 18.
Congestion, explained, 77 ; of stomach, 78.
Congestive apoplexy explained, with treatment of, &c., 104-108.
——— consumption explained, with treatment of, &c., 90-96.
——— rheumatism explained, with treatment of, &c., 98-101.
Constipation, 85 ; when beneficial, 116, 141, 142.
Constitution, the British, 85.
Consumption, from what developed, 40 ; congestive and inflammatory, 62, 73 ; hospital for, 73 ; not a purely lung disease, 93 ; congestive, explained, with treatment of, &c., 93-96 ; inflammatory, explained, with treatment of, 96-98.
Consumptive patients, proper localities for, 95, 97.
Contusions, treatment of, 69-70.
Convulsions, infant, treatment of, 105-106.
Cough, congestive and inflammatory, 82 ; tracheal, or throat and stomach, 84 ; asthmatic, 87, 161.
Counter irritants, more useful in congestive than inflammatory actions, 89 ; natural and artificial, 120, 131.

DEAFNESS, remarks on, 20.
Death, decomposition after, 110.
Diagnosis, or the art of discovering disease, 47.
Diarrhœa, explained, 109-112 ; treatment of, 113 ; congestive and inflammatory, 109-110 ; produced by fear, 112.
Diet, attention to recommended, 36 ; variety of necessary, 59-60 ; is medicine, 63, 149 ; division into three, 64 ; different in the two forms of consumption, 97.
Dietaries of Government pernicious, 61.
Dietitians, principles of, condemned, 36 ; errors of, 60.
Digestion, shows the uses of organs, 6 ; powers of, depend on food, 7.
Digestive and stomach tract on the tongue, 49.
Diluting phenomena, 7, 17.
Diphtheria, what it is, and treatment of, 79, 80.
Disbelief in medicines by old physicians, the cause of, 145.
Discoverers, their fate, 15-16.
Disease, never been properly understood, 41 ; explained, 42 ; treatment of, cannot be rehearsed, 44 ; specific, 44 ; Nature's cure of, 45 ; functional and organic, 46 ; aid of chemistry in, 47 ; first actions are of an acid or congestive character, 52 ; progress and retrogression of, 54 ; empirical treatment of, 56 ; congestive and inflammatory, 62, 74 ; little real, 66, 148 ; arrangement of, 72 ; confusion of, 73 ; depends on certain conditions of the system, 76 ; first act of, 77 ; drug, 131 ; gradation of, 128, 134, 138 ; functional, 159.
Disorders of the system, 45.

Dizziness, 85.
Doctors not agreeing, 46, 57, 75.
Dropsies, the result of, 122.
Drugs, their divisions, 64; combination of, 154.
Duodenum, or chemical stomach, where situated, 4.
Dysentery explained, 111.

EAR-BONES described, 2.
Ears, 20.
Earthly matters, what they consist of, 27.
Education, early, important, 38.
Electric power and galvanic actions, 32-33, 150.
——— telegraph analogous to nervous system, 24, 33.
Elements, chemical, battle of opposite, 64; act by antagonism, 150.
Emetics, prescriptions for, 158.
Empiricism eulogizes the mercurials, 129.
English school of medicine, 186.
Engorgement explained, 77.
Epithelium, organized mucus, 21.
Epsom-salts, use of, 163.
Errors in medicine, 44-45.
Eruptions, distinct course of the measles and scarlet-fever, 125.
Evacuants, the regular and irregular, 10.
Exercise, mental, 37; bodily, 38.
Expectoration, 95, 160.
Eyes, structure of, 19; prescription for, 166.

FACULTY, the, constantly condemned by the public, 184-185.
Fæcal matter requisite for stuffing large intestines, 60.
Falls or contusions, treatment of, 69-70.
Fat, 3.
Feet, use of, 1.
Female servants subject to pleurisy, 90, 127.
Fermentation, 153.
Fevers, giving aperients for, condemned, 11; congestive and inflammatory, 62, 73; scarlet, explained, with treatment of, &c., 58-59, 121-126; the opprobrium of medicine, 133; quotidian, tertian, quartan, are venous, 135; congestive, or venous and acid, 135-136; treatment of, 139-143; inflammatory, or arterial and alkaline, 137-138; treatment of, 141-143; typhus, 138; emetics check them, 159; prescriptions for, 167-169.
Fibrine, composition of, 28.
Flatulence, causes pain, 62; treatment of, 85.
Food, quantity and quality important, 36; its passage downwards traced, 6-9; and physic, 57, 61; fresh, almost wholly alkaline, 59, 146, 150; nitrogenized and non-nitrogenized, 60.
Foot-bath, pernicious use of, 40.
Framework of body, 1-3.
French school of medicine, 186.
Functional disease, 46, 159.

GALVANISM, its utility, 150.
Ganglion, a small knot of nerves, and uses of, 22.
Ganglionic system, 22-25, 33.
Gaseists, new pathologists, 10.
Gases, vital, where generated, 9, 29; with the fluids and solids equally important, 10, 29; different kinds of, 27; measurement of, 28.
Gastric or stomach-acid, 26.
Gelatine, component parts of, 28.
Germination of fever-poisons, 135.
Glands, congestive condition of, 91, 92.
Glossology, explained, 48; will tend to more perfect agreement among doctors, 57; unerring in the diagnosis of disease, 147; its new principles, 182.
Gout in men, 43; treatment of, 103.
Government, its dietaries pernicious, 61; Medical Board, its cruel and pernicious orders, 117.
Gradation of disease, 128, 134, 138.
Gravitation of morbid elements produce specific disease, 154.
Gullet, where situated, 4.

HÆMORRHOIDS, or piles, medicines for, 162.
Hair, chemical constituents of, 26.
Hard drinkers, 90.
Harvey, his discoveries, 15-16.
Head or skull, description of, 2; contents of, 5; uses of contents of, 19; divisions of, 54.
Headaches, location of, 54-55, 85; apportioning of to parts of the body, 54-55; vertex, peculiar to females, 55.
Health and disease, 34. *See* also work on, 85.
——— vital balance of, 35.
Heart, situation of, 4; division of, 15; its uses and duties, 15-19; shown on the tongue, 49-50; complaints, 85; diseases of, produce pains resembling rheumatism, 102.
Heartburn, treatment of, 85.
Heat or caloric, how evolved, 18; importance of, 29.
Hiccoughs, treatment of, 85.
Homœopathists, remarks on, 65, 147-148.
Hospital practices, 75, 148.
Hot and cold remedies adversely applied, 67-70.
Hot applications, when necessary, 70.
Humoural pathologists, 10.
Hybernators, 30.

IGNORANCE of the public of their own bodies, 65.
Infant apoplexies, 31.
Infants, folly of giving them solids, 31; not to be washed in cold water, 39; and their diseases, 169, 176; prescriptions for, 170-175; some medicines should be given warm, 172, 174; their livers seldom out of order, 176.
Infiltration or injection explained, 77.
Inflammation not always allied with pain, 62.

Inflammatory cholera, explained, with treatment of, 111-116; prescriptions for, 163-164.

——— actions in tropical climates, 164, 165; consumption explained, with treatment of, &c., 96-98.

——— rheumatism, explained, with treatment of, 101-103; prescriptions for, 163, 164.

Influenza explained, with treatment of, &c., 118-121.

Insurance offices, their questions, 91.

Intestines, large and small, how situated, 4.

JENNER, and vaccination, 16, 36; his discovery, value of, 43.

John Bull, 85.

Joints described, 2.

KIDNEYS, where situated, 4; remove only a portion of urea from the blood, 12; object and use of, 43; their tracts on the tongue, 49; when affected, 53, 74.

LABORATORY, chemical elements used in the, 35; of the body, 139, 145, 146, 149, 159.

Lacteals, 5; use of, 17.

Large intestines, duties and use of, 9, 12, 29; their tract on the tongue, 49; when affected, 53; last affected and first relieved, 53-54.

Legs, mechanism of, 1.

Liberty, civil and religious, 34.

Life, 32; lamp of, 41; tenacity of, peculiar to organic disease, 97.

Ligaments, 2; chemical constituents of, 26.

Liniments, when to be used, 100.

Linseed-meal poulticing, 68; good in rheumatism, 101.

Liver, situation of, 4; peculiarity, duty, usefulness and abuse of, 12-14, 154; diseases of, an universal monomania, 14.

Liverpool fever, the late, remarks on, 183.

Lumbago, treatment of, 99, 101.

Lungs, situation of, 4; uses of, 18.

Lymphatics, 5; traverse the whole body, 17; use of, 17.

MEASLES, cause of, 43, 118; explained, with treatment of, 58-59, 118-121; aperients useful after, 161, 162, 175.

Meats, roast and boiled, 60.

Meconium, the natural stuffing in the intestines of the young of animals, 30.

Medical Board, Government, its cruel orders, 117.

——— warfare, strategetic rules of, 106.

——— empirical treatment, right or wrong by accident, 112.

——— students, the, 185.

Medicine, practice of, as it now is, 56, 64, 75, 185; requires reconstructing, 65.

Medicines, curative, few in number, 63, 149 wrong, may cure accidentally, 62, 147.

Membranes, mucous and serous, explained, 5-6; their uses, 21, 24; serous, cause most pain, 24; disease of mucous, shown on the tongue, 56; disease of serous, shown on the tongue, 56; sympathy between, 123.
Mental exercise important, 37.
Mercurials, their use condemned, 14, 74, 130, 169, 178.
Metamorphosis of structure never ceases, 28; by this act produce other structures, 30.
Midriff, dividing the chest from stomach, 4.
Milk, curdled by stomach acids, 9; does not solely support life, 30.
Milt, *see* Spleen.
Mineral matters, what consist of, 27.
Mucus, chemical constituents and properties of, 26; filmy, 59.
Muscles, uses and number of, 3; chemical constituents of, 25.

NATIONS, selections of their diet forms a philosophy, 60.
Nature, governed by law, 1; economy of, 17, 29, 30; bounty of, 41; her pharmacopæia and vital chemistry, 115.
Nerves, division of, 5, 22; current and negative currents of, 23, 25; how nourished, 24; compared to electric telegraph, 24.
Nervousness, 87.
Neuralgia explained, with treatment of, 104.
Neutral medicines, 151, 153.
Nose, structure and use of, 20.

OCCULT diseases, 147.
Oculists useful in delicate operations, 20.
Old persons, warmth necessary to, 40.
Opium, its preparations and doses, 178.
Organic life, great principle of, 32.
——— matter never at rest, 28.
Organs, internal always in apposition, 5.
Oven-aud-brandy principle, 67-69.

PAIN, not always indicative of inflammation, 62; caused by flatulence, 62; and spasm in young women, 177.
Painters' colic, 86.
Palsy, 108.
Pancreas or sweetbread, explained, and where situated, 4; use of, 12.
Papillæ, terminations of arteries, 20; nerves of taste at their base, 20.
Paralysis explained, and treatment of, &c., 108-109.
Peccant parts, 136.
Pelvis, centre of strength, 2.
Peritonitis, explained, 117; treatment of, 129, 130.
Perspiration, chemical constituents of, 27.
Phthisis, pulmonary, incurable, 94.
Physic, fashion in, 63.
Physician, the, an important member of society, 146.
Physiologists challenged, 54.
Physiology explained, 6.
Pile of the tongue, growth of, causes furring, 55.

Plethora, result of, 43.

Pleural tract on the tongue, 49.

Pleurisy, explained, with treatment of, 89-90, 127, 129, 130; frequent in female servants, 90, 127.

Plexus, half-moon and solar, a network of nerves, 22.

Pneumonia, explained, 126; treatment of, 129, 130.

Poisons, their varieties, 144-146.

Poverty, remarks on, 91.

Predisposition, 105, 129, 132, 143.

Prescriptions, for all simple disorders, 155-157; for making emetics, 158, 177; for bronchial congestion, 160, 161; for aperients, 161, 162, 175; for piles, 162; for inflammatory rheumatism, 162, 163, 178; for diarrhœa or cholera, 163, 164; for lotions and gargles, 165; for bronchitis, 166, 167; for fevers, 167-169; for infants and children, 170-172; for scarlet-fever, 173; for women, 177; for opium, 178.

Progress and retrogression of disease, 54.

Public, the, and the medical profession, 65.

Purging, its excessive use condemned, 11; recommended after measles, 120, 175. (*See* also Aperients.)

QUININE, its properties, 140, 167; beneficial in fever, 140, 167; prescriptions of, 168.

Quinsies explained, with treatment of, 79-81.

RED-GUM, 36.

Respiratory and lung-tract on the tongue, 49.

Rete vasculare, use of and remarks on, 30-31.

Revolution in medicine required, 46, 74.

Rheumatic-gout in females, 43; treatment of, 103.

Rheumatism, how produced, 42; congestive and inflammatory, 62, 73; congestive, explained, with treatment of, &c., 98-101; inflammatory, explained, with treatment of, 101-103; in upper and lower extremities, differently treated, 103; prescriptions for, 162, 163.

SALIVA, chemical constituents of, 26.

Salts, 152.

Scarlet-fever, explained, with treatment of, &c., 58-59, 121-126; prescriptions for, 173.

Schools, trammels of, 109.

Sciatica, treatment of, 99, 101.

Science and art of medicine, distinct, 125.

——— and charlatanism, the former will ultimately triumph, 66, 148.

——— does not advance by concealing its knowledge, 76.

——— of prescribing medicine, 149.

Secretions, their solvent properties, 7; general state of, in all diseases, 62; the cooling fountains of the body, 137.

Self-dependence of animal life, 17, 29, 30, 35.

—— torture, prevalence of, 67-71.

Sempstresses, habits of, 66.

Serum, properties of, 27.

Servant-girls subject to pleurisy, 90, 127.
Shock to the system, term used explained, 129.
Skin, 3; chemical constituents of, 26; diseases, 46, 74, 131.
Skull, *see* Head.
Slop-diet, injurious in cholera, 115.
Small-pox, how produced, 36, 43; requirements of, 58.
Smelling-salts and aromatic vinegar, distinctive actions of, 124.
Society, why necessary, 37.
Solidists, their pathology, 10.
Sore-throat, what it is, and treatment of, 79-81; clerical, explained, 84-85.
Spleen, or milt, situation of, 4; use of associated with thirst, 14-15.
Sprains, treatment of, 70.
Stimulants, when called for, 141.
Stomach. situation of, 4; should have solids to act on, 7; tracts on the tongue, 49; ceases to secrete after digestion is completed, 59; congestion of, 78; cough explained, 84.
Stone and gravel, how produced, 59; treatment of, 86.
Sweating-sickness and cholera, 109.
——— good in congestive actions, 100.
Sweetbread or pancreas, 4.
Symptoms, many in common to opposite diseases, 48.
Synovia, or joint oil, 3.

TASTE, not confined to tongue, 21; organs of, 50.
Temperature of the body, 29.
Tendons, chemical constituents of, 26.
Thigh, structure of, 1.
Thoracic duct, use of, 17.
Throat-cough explained, 84.
Throats, sore, explained, with treatment of, 79-81; ulcerated, 79, 81.
Tic-doloureux explained, with treatment of, 104.
Toes, structure of, 1.
Tongue, noble duties and uses of, 20-21; its appearances, 48, 55; fouling and cleaning of, 48, 50, 52, 53, 55; its divisions or tracts, 49-51; moving and tasting portions, 50; condition of, in health, 55; foul before meals, 59; a sure index in disease, 64, 128, 160, 165, 166, 167, 172, 173, 174.
Tonsils, enlarged, explained, with treatment of, 79-81.
Torture, medical and self, 66.
Toxicologists, 144.
Tracts on the tongue, 49.
Truth alone to be honoured, 76.
Typhus fever, 138.

Ulcerated throat, what it is, and treatment of, 79-80.
Urine, chemical constituents of, 27.

Vaccination, value of, 43.
Variety of food necessary, 60.
Vegetable matters, acid and alkaline, 27.
Veins, traverse the whole body, 5; their construction, 17.

Ventilation important, 40.
Vertex headaches, peculiar to females, 55.
Vitality, in what it consists, 41.
Vomiting, 139, 158.

Wasting diseases, how caused, 44.
Water, component parts of, 28, 31.
Whitlows, treatment of, 69.
Whooping-cough, cause of, 43 ; explained, with treatment of, 83.
Windpipe, how situated and what composed of, 4.

THE END.

WELLCOME LIBRARY INSTITUTE

LONDON : PRINTED BY WILLIAM CLOWES AND SONS, STAMFORD STREET.

Second Edition, 624 pages, Crown 8vo, 12s.

HEALTH AND DISEASE:

THEIR LAWS;

WITH PLAIN PRACTICAL PRESCRIPTIONS.

BY BENJAMIN RIDGE, M.D., F.R.C.S., &c.

WRITTEN EXPRESSLY FOR THE INFORMATION OF THE PEOPLE.

OPINIONS OF THE PRESS.

"The uninstructed reader will find a large amount of useful information throughout this work. It is a far better work than most of its kind."—*Medical Circular.*

"The merit of this work is, that every chapter on science is charged with its practical message; it is the union of the two that makes the book so agreeable to read. It is full of useful hints."—*The Leader.*

"There is, altogether, so much sound common-sense in this volume, that we can safely recommend it to the non-medical reader as a trustworthy manual."—*The Atlas.*

"We honestly record our gratification at the boldness with which one scientific man has stepped from the ranks of shrouded reserve, and shown us that there is little mystery, after all, in the first principles of true science."—*The Literary Gazette.*

"This work may be classed among the most valuable contributions recently made to medical literature."—*The Morning Chronicle.*

"We welcome this book on its own obvious merits. We are satisfied to recommend it as a popular and safe manual, conveying much information which cannot be too widely known."—*The Press.*

"Dr. Ridge lays before the world his admirable exposition on 'Health and Disease,' the natural laws of the one, the causes of, and the remedies for, the other."—*The Civil Service Gazette.*

CHAPMAN AND HALL, 193 PICCADILLY.

OPINIONS OF THE PRESS.

"Dr. Ridge writes like a man who thoroughly understands his subject. We know of no work which commends itself so strongly as the one before us." —*Sunday Times.*

"We can honestly recommend Dr. Ridge's work to the use of the public as a valuable addition to domestic medicine and the literature of popular physic." —*The Era.*

"Dr. Ridge's work will be a real boon, a guiding star to the professionally ignorant."—*The Military Spectator.*

"We recommend this volume, on account of the amount of valuable matter it contains."—*Daily Telegraph.*

"The merest tyro may consult its pages with both mental and physical benefit. We therefore recommend this volume."—*John Bull.*

"Dr. Ridge's book is so sensibly written that we have little hesitation in recommending it."—*Economist.*

"This work is well written as a literary production, and it contains an immense mass of knowledge popularized to every capacity."—*The Observer.*

"The only sensible book we have read upon the subject from Dr. Buchan downwards; it should be in every house throughout the country."—*Gardener's Gazette.*

"There is a plain and rightminded straightforwardness manifested in this medical volume, which commends itself at once to our approbation."—*Bell's Weekly Messenger.*

"Every person possessing a well-constituted mind will find in this compact volume much to instruct on vital though often disregarded points."—*Morning Advertiser.*

"Never has a work appeared on these subjects, to our judgment, possessing more interesting matter, and it should be in the possession of every family."—*The Morning News.*

"We cannot omit noticing a work on 'Health and Disease,' by Dr. Ridge, evincing great learning and common sense, and much keenness of observation. We recommend it to all, and believe the writer to be a first-rate man and most intelligent physician."—*The New York Herald.*

"Though not published in the colony, we yet feel justified in speaking favourably of this work by Dr. Ridge, an eminent London physician. It is singularly free from the dogmatism of professional routine, and by its plain common-sense directions is admirably adapted to the circumstances of an isolated population."—*The Natal Mercury.*

CHAPMAN AND HALL, 193 PICCADILLY.